THE

ENGINEERING

AND

MINING JOURNAL.

VOLUME LIX.

JANUARY TO JUNE, 1895.

SCIENTIFIC PUBLISHING COMPANY,

253 BROADWAY,

NEW YORK.

THE

ENGINEERING AND MINING JOURNAL.

VOLUME LIX., JANUARY TO JUNE, 1895.

INDEX.

(ILLUSTRATED ARTICLES ARE DESIGNATED BY AN ASTERISK.)

A

Abbott, A. 83
Abbott, A. V., *Evolution of an Electrical Switchboard* 99
Abbott, Elmer A., Fuel Gas Burner, Pat 202
Abe Lincoln Mine, Colo 589, 588
A. B. G. Mine, Colo 85
Absorbent Blocks 562
Accident to Machinery—Contract 105
Accidents, Mine 178
Accident, Mine, Colo 36
Accidents in Road Traffic, London 415
Accountas Mines, Colo 228
Accounting under a Mining Contract, Legal Decision 248
Accumulator, Schaefer-Heinemann 118
Acetylene Gas, Producing and Liquefying Pat 298
Acetylene 274
Acid Market ..... Weekly
Ackerman Mine, Cal 396
Acme Mine, Wyo 567
Ada Con. Mg. Co 621
Adaddell Claim, Colo 565
Adams Iron Mine, Minn 61, 205, 397
Adams, J. W., Pa 324
Addyman, Frank T., Agricultural Analysis 314
Aerial Navigation Congress, Report 98
Ætna-Argent Mine, Colo 36
Æ.na Standard Co., W. Va 107
Africa, Central, Minerals of 464
Africa, Gold Production 123
African Gold Recovery Co., Transvaal 112, 255, 447
Agricultural Analysis, Principles and Practice of 314, 459
Agwalt Mining Co., Colo 277
Ahrens & Ott Mfg. Co., Ky 395
Aimee Mine, Colo 325
Air Compressed, Pumping by 314
*Air, Compressed, Uses of 100
*Air Compression, Economy in 269, 290
Air Compressor, Good's Pat 58
Air Compressor, Miles' Pat 11
Air Compressor, Pat 250
Air Compressor Pump., Pat 226
Air Compressor, Regulator for, Pat 250
Air or Electro-Motor, Clarke's Pat 490
Air, First Liquefaction of 314
Air Pump, Pat 250
Ajax Mg. Co., Utah, 63, 135, 254, 446, 477, 501, 525, 549, 573, 597, 621
Akron Iron Co., O 371
Alabama Coal and Coke 581
Alabama Coal, Iron and Land Co 562
Alabama, Geological Map 98
Alabama, Indus. & Scientific Society 563
Alabama Mine, N. Mex 302
Alabama Pipe Works, Ala 275
Alabama Rolling Mill Co., Ala 35, 587
Alabama Steel Works Co., Ala 204
Aladdin Coal Co., Wyo 15
Aladdin Mg. Co., Colo 13
Alamo Mine, S. C 255
Alameda Mine, Cal 549
Alaska & Grizzly Mine, Cal 612
Alaska Gold & Silver Mg. Co., Mont 566
Alaska-Mexican Gold Mg. Co. Alaska 36, 84, 227, 276, 372, 420, 453, 477, 501, 525, 549, 564, 573, 597, 621
Alaska-Treadwell Gold Mg. Co., Alaska., 36, 102, 117, 156, 189, 193, 276, 285, 357, 372, 381, 405, 429, 453, 477, 492, 501, 525, 549, 573, 588, 597, 621
Alaskan Mine, Cal 372
Alta Mine, Cal 204
Albertson Placer, Mont 543
Albrecht, Herman S., Artificial Fuel, Pat 442
Albright Coal Co., Pa 62
Alcade Furnace, Rusk, Tex 491
Alderson Mine, Ind Ter 493
Alexander, J., *Model Engine Construction* 123
Algeria, Phosphates 583
Alhambra Mining Camp, Colo 252
Alice Clark Mine, Cal 84
Alice Furnace, Ala 35
Alice Mg. Co., Mont 182, 206, 301, 371
Alice Mine, Cal 84, 180
Alkaline Cyanides, Making, Goerlich & Wichmann's Pat 610
Alkali, Electrolytic Process 514
Alkali Exports, Great Britain 308
Alkaline Sulphides, Action on Cyanide Solutions 510
Allegheny Iron Co., Va 12
Allegheny, Pa., Electric Light Plant 251
Alliance Mg. Co., Utah 159, 183, 207
Allegheny Gold Mg. Co., Colo 109
Allegheny Mine, Colo 109, 205
Allis, E. P., Co., Wis 155, 299, 491
Allison, Joseph H., Amalgamator Pat 418
Allouez Copper Mining Co., Mich. 253, 277
Alloys, Manufacture of, Pat 394
Alloy, Manganese Copper Mfre., Pat. 370
Alloy, Pat 202
Alloys, Research 490
Alloy of Zinc, Pat 202
Alma Coal Mine, Wyo 447
Alma Con. Mg. Co., S. Dak 87
Alma Mine, Cal 84, 396
Alma Placer Mines, Colo 228
Almaden Quicksilver Mines, Spain 130
*Almond Coupling 57
Alpena Iron Mine, Minn 37
Alpha Con. Mg. Co., Nev. 14, 117, 182, 206, 278, 543, 557, 621
Alta Mg. Co., Nev. 14, 23, 47, 71, 86, 158, 182, 206, 278, 350, 374, 397, 477, 493, 501, 525, 543, 549, 567, 573, 590, 597, 621
Alta-Argent Mg. Co., Colo 85, 157, 228, 349, 421, 516
Alta Mining Co., Colo 277
Alta Mine, Idaho 349
Alta Mine, Montana 517
Alta Mg. Co., Utah 63
Alternating Currents of Electricity 2
Alternating Current Wiring and Distribution 2
Altoona Quicksilver Mine, Cal 444
Altschul, Rudolph, Hydrocarbon Furnace Pat 391
Alturas Gold Mg. Co., Idaho 213
Alumina from Clay 561
Alumina Reduction by Carbon 562
Aluminum Alloy, Action of Chlorides 579
Aluminum, Electro-deposition, Harris' Pat 154
Aluminum, Commercial, Impurities 580
Aluminum, Hartsfeld, Humbug 577
Aluminum in Incandescent Lamps 130
Aluminum in Metal Refining 57
Aluminum, Large Order 97, 117
Aluminum, Method of Plating, Pat 298
*Aluminum Manufacture, Joseph Hall's Process 581
Aluminum, Protective Coating for, Pat 370
Aluminum, Prices ..... Weekly
Aluminum Reduction, Electrolytic, Gooch & Waldo's Pat 34
Aluminum, Societe de Froges 97, 117
Amador County Mines, Cal 60
Amador Gold Mg. Co., Cal 429
Amalgamated Ass'n Iron and Steel Workers, 59, 131, 179, 420, 419, 540, 588, 593
Amalgamating Apparatus, Pat 226
Amalgamation and Russell Process at Blue Bird Mill 99
Amalgamation, Gold, Pat 250
Amalgamation, Process for, Pat 250
Amalgam Thief, Colo 516
Amalgamator and Crusher, Robinson & Plumb's Pat 154
Amalgamator, Coe's Pat 11
Amalgamator, Bernardi's Pat 34
Amalgamator, Bailey's Pat 11
Amalgamator, Tanner's Pat 58
Amalgamator for Precious Metals, Pat 250
Amalgamators, Improvements on, Pat 418
Amalgamator, Pat 316, 418, 442
Amarillas Mine, Mex 447
Amorosetti, J. B., Pampa Central Copper Mines 555
Amelia Mine, Cal 276, 420
American Aluminum Co., Mo 107
American Association Advancement of Science 515
American Bankers' Ass'n 378
American Coal Co., Md 16, 165
American Chemical Society 12, 587
American Colleges, German Opinion 79
American Compressed Air Motor Co., N. J 12
American Developing and Mg. Co., Mont 134, 195 285, 357, 381, 405, 429, 453, 477, 501, 525, 549, 573, 597, 621
American Eagle Mine, Colo 16, 132, 204, 276, 495
American Exhibition in S'th Africa 467
American Export Trade 578
American Express Co 549
American Flint Glass Workers' Union 587
Am. Hoist & Derrick Co., Minn 299
American Institute Mining Engineers, Florida Meeting 203, 292
American Lubricating Co., N. J 407
American & Mexican Con. Mg. Co., Cal 453
American Nettie Mine Co., Colo., 349, 565
American Pig Iron Storage Warrant Co., N. Y 137, 329
American Securities in Europe 450
American Signal Co., Md 515
American Society Civil Engineers, 12, 59, 167
American Society of Mechanical Engineers 563
American Smelter, Colo 60
American Steel Casting Co., Pa 153, 515
American Tube & Iron Co., O 179
American vs. British Iron and Steel 170
American Wire Nail Co., Md 540
Ames Iron Works, N. Y 567
Ames, J. G., *Index to U. S. Government Publications* 98, 339
Amethyst Mine, Colo 228
Ammon Mines, Mont 416
*Ampere Meter, Bristol's Recording 273
Armstrong, J 587
Anaconda Mg. Co., Colo 85, 132, 156, 205, 228, 421
Anaconda Mg. Co., Mont 38, 429, 477, 566
Analyse, Einfuhrung in das Studium der Qualitativen Chemischen 290
Analysis, Sodium Peroxide in 514
Analysis, Qualitative Chemical 147
Analysis, Steel Works 290
Anchoria Leland Mine, Colo 276, 349, 0453
Anchor Mining Co., Utah 423, 589
Ander Mg. Co., Nev 477
Andersen, Carl 371
Andersen, Nicolai 395
Anderson, Carl, Ore Treatment in the Cooney Mining Dist., N. M 388
*Anderson, Carl, Cooney Mining Dist., N. M 343
Anderson, J. W., *Prospector's Handbook* 531
Andes Mg. Co., Nev 14, 86, 110, 453, 501, 525, 543, 549, 573
Andover Furnace, N. J 83, 179, 204
Andorite 539
Andreoli, E., Use of Cyanide of Potash in Gold Extraction 412, 436
Andrews Bros. Iron Co., O 12
Andrews' Researches on Iron Corrosion 99
Anglo-American Club, Saxony 227
Angels' Camp, Cal 204, 507
Angell, Edwin E., Electric Metal Heating Pat 370
Annie Con. Mg. Co., Ore 15
Anniston Pipe and Foundry Co., Ala. 137
Anodes Casting, Hexon and Dybiu's Pat 490
Antimonial Ores, Treatment of 393
Antimony, Market in 1894 7
An imony Mine, Colo 516
Antimony, Prices ..... Weekly
Antlers-Park-Regent Mg. Co., Colo., 109, 157
Antonienhutte, Prussian Silesia 563
Anton, Christopher L., Miners' Lamp, Pat 418
Antofagasta Mines, Chile 615
Antrim Iron Co., Mich 59
Anthracite Coal Alloment 280, 351
Anthracite Coal Companies' Meeting. 16
Anthracite Coal, Limitations of Production 208
Anthracite Coal Meeting 424
Anthracite Coal Mines, Pa 423
Acthracite Coal Operators' Ass'n 184
Anthracite Coal Prices, Pa 397
Anthracite Coal Production, 1894 ..88, 181, 472, 592
Anthracite Coal, Restricting Production 520
Anthracite Coal, "Salvation Committee" 40, 64, 88, 112, 136, 160, 304
Anthracite Coal Trade, 1894 3
Anthracite Coal Trade ..... Weekly
Anthracite District, 6th. Pa 302
Anthracite, Fourth District, Pa 159
Anthracite, Mine Inspectors, Pa 112
Anthracite, Miners' Wages, Pa 39, 135
Apex Crossing and Tunnel Decisions. 365
Appalachian Steel & Iron Co 179, 611
Apparatus of Mixing Coal Dust, Schmitz's Pat 539
Apparatus for Handling Oil for Fuel, Pat 394
App & Heslepp Mine, Cal 84
Appliances, Liability for Condition of. 538
App Mine, Cal 492
Apprentice, Wrongful Discharge 105
Aragon Iron Co., Mich 37, 61
Aramo Mine, Spain 130
Arden's Pat. Magnetic Separator 82
Arena Mg. Co., Colo 589
Arequa Mg. Co., Colo 396
Arethusa Iron Works, Pa 371
Argentina, Pampa Central Copper Mines 555
Argentina, Sierras de los Partidos, y oel Azul 99
Argentum Juniata Mine, Colo 589
Argonaut Mine, Cal 84, 396
Argon Mg. Co., Co'o 516
Argon, New Constituent of the Atmosphere 154
Argon, Spectra of 442
Argyle Mg. Co., Colo 109
Arivaca Mill, Ari 156
Arizona School of Mines 203
Arkansas Zinc Mining 123
Arlington Quarry Co., Pa 471
Armor Plates for Battleships, Deliveries 610
Armor Plates, Mfg. of Pat 226
Armor Plate Test 251, 274, 298, 418, 440
Arnold, John L., Hydrocarbon Burner, Pat 202
Arnold, J. O. *Steel Works Analysis.* 290
Arsenic, Effect on Steel 560
Artificial Stone, Peters' Pat 490

Assays of Copper and Copper Matte. 602
Assaying Copper at Lake Superior 369
Asbestos Mining & Mfg Co., N. J 324
Asbestos, Novel Uses of 243
Aschman Steel Casting Co 204
Assessments, Mining Companies. Weekly
Assessments 213
Ashcroft District, Colo 36
Ashcroft Tract, Mo 38
Ashland Iron and Steel Co., Wis 83
Ashland Mine, Wis 589
Ashley River Mg. Syndicate, Fla 181
Associated Phosphate Mines, Fla. 373, 421
Ass'n of Engineering Societies, meeting 203, 324
Association of Engineers of Virginia, meeting 251, 443
Aspen District Mines, Colo 349
Aspen Mesa Mg. & Milling Co 492
Aspen Mine, Colo 396, 421
Aspen Mining Claims, Colo 37
Aspen Sampling Works, Colo 349, 396
Aspen Smelting Works, Colo 228
Aspen Stock Quotations ..... Weekly
Aspen Union Smelting Co 492
"Astronomy and Astro-Physics" 99
Atkin's Pat. Solvent for Gold 490
Atlanta Lode, Idaho 128, 589
Atlantic Crushed Coke Co., Pa 347
Atlantic Iron Works, Pa 371
Atlanta Mine, Idaho 589
Atlantic Mg. Co., Mich., 61, 134, 229, 253, 326, 446, 542, 566
Atlantic Mining Co., Report 246
Atlantic Works, Limtd., Pa 395
Atlas, New York State 602
Atmosphere, New Constituent, Argon 154
Auburn Mine, Minn 301
Augusta Granite Co., Maine 229
Augusta Mg. Co., Colo 612
Aurora Group Mines, Colo 253
Aurora Iron Mg. Co., Minn 45
Aurora & Mountain Sprite Claims, Wash 63
Austerlitz Mine, Ari 156
Austin Mining Co., Nev 206, 278, 397
Australia, Bendigo, Mining at 29
Australia, Coal 56
Australia, Cobalt 490
Australia, Gold 554
Australasian Institute, Mining Engineers 83
Austria, Carpano Coalfield 54
Austria, Electricity in Mining 560
Austria, Fire Damp Explosion 303
Austria, Gold Loan 43, 187, 211
Austria-Hungary, Brown Coal 34
Austria-Hungary, Currency Reform 235
Austria-Hungary, Foreign Trade 211
Austro-Hungarian Bank 189
Automatic Hydraulic Air Pump., Pat 226
Ayerigg, Benjamin 131
A., Y. & Minnie Mine, Colo 492

B

Baby Boy Gold Mg. Co., Wyo..... 514
Baby McKee Mine, Colo..... 564
Bachelor Mining Co., Colo..61, 109, 349, 445
Back Pay Mine, Mont..... 158
Bacon's Pat. Stone Crusher..... 539
Bailey's Pat. Amalgamator..... 11
Bailey's Reward Mg. Co., W. Australia..... 69
Baisley Elkhorn Mine, Oregon135, 230, 397
Baker City Mining Dist., Oregon..... 230
Baker, George W..... 395
Baker, Harold M. Process of Amalgamating & Separating Metals, Pat... 370
*Balance, Analytical..... 225
Bald Butte Mine, Mont., Div..... 285
Bald Butte, Mg. Co., Mont....102, 195, 357, 381, 405, 429, 453, 479, 501, 525, 549, 573, 597, 621
Bald Eagle Mine, Colo..... 588
Bald Mount, Alert Mg. Co., Colo .429, 477
Balfour Gold Mg. Co., Colo..... 37
Ball Engine Co., Pa..... 131
Ball's Pat. Stone Channeling Machine..... 610
Ballarat Mines Association Victoria.. 472
Ballstavy Iron Mine, France..... 393
Ballou, Franklin..... 35
Baltimore Belt Line Tunnel.....60, 611
Baltimore Electric Refining Co..... 44
Baltimore Iron and Steel Co., Md..... 419
Baltimore Mg. and Milling Co., Idaho..... 326
Baltimore & Ohio Coal Rates.....40, 64
Baltimore Stock Quotations.....Weekly
Baltimore & Victoria Mg. Co., Colo... 133
Baudouin, Henri, Concentrator and Amalgamator for Precious Metals. Pat..... 250
Bangkok-Cora Bell Mg. Co., Colo., 45, 102, 141, 195, 285, 357, 381, 405, 429, 453, 477, 501, 525, 549, 573, 597, 621
Bank Clearings.....66, 354, 450, 570
Bank of England Statement.....Weekly
Bank of France, Charter..... 21
Bank of France Statement.....Weekly
Banker Shaft, Colo..... 372
"Bankers' Magazine"..... 51
Bankruptcy Report, Great Britain.. 19
Banksville Coal Mines, Pa ...159, 183, 254
Banner Mine, Idaho..... 182
Barbier, Eugene J., Sulphuric Acid, Pat..... 298
Bardeleben, De H. F..... 587
Barima Gold Mining Co., British Guiana..... 323
Baring Settlement..... 91
Barnet, C., Miners' Drill, Pat..... 250
Barnhart's Pat. Amalgamator..... 34
Barren Fork Mg. & Coal Co., Kentucky..... 517
Barroll, H. H., U. S. N..... 419
Barstow District, Cal..... 60
Barnhlett's Pat. Metallurgical Furnace..... 490
Bartow Foundry and Machine Works, Fla..... 131
Basic Slag, Solubility of..... 197
Basin & Bay State Mg. Co., Mont..102, 429, 578
Bass Furnace..... 611
Bassick Gold Mg. Co., Colo.....516, 520
Bate Refrigerator Case..... 217
Bates, D. C..... 203, 212
Bates Pat. Excavator and Conveyer.. 514
Batopilas Mg. Co., Mex.....303, 417
Battery, Boron-Carbon..... 58
Battery, Walker-Wilkins Non-polarizing..... 105
Battle Creek Coal, Tenn..... 327
Battle, H. B., Calculation of Value of Fertilizers..... 270
Bauer, C. H., Flue Dust Condensers.. 342
Bauer Mg. Co., Ariz..... 348
Bauman, A. H..... 347
Bauxite, Georgia..... 585
Bauxite Shipments, Ala..... 12
Bauxite Shipments to Germany..... 529
Bay State Furnace, Ala..... 515
Bay State Mg. Co., Cal.....108, 453, 477
Bayer, Karl J., Mfg. of Chlorate of Potash, Pat..... 442
Beadle, H. M., Bassin & Bay State Mg. Co., Mont..... 102
Beadling Bros. Coal Plants, Pa..... 231
Beal's Pat. Rock Drill..... 11
Bear Creek, Colo..... 612
Beard, J. T., *Ventilation of Mines*.... 578
Beauty Mine, Utah..... 351
Beaverhead County Mines, Mont..... 374
Beaver Lake District, Utah..... 135
Beaver Park Mine, Colo.....132, 468
Beer's Pat. Concentrator..... 11
Behnke, I. H. C. Prevention of Spontaneous Combustion of Coal, Pat... 370
Belden, F. E., Mica Co....165, 195, 208, 285, 333, 357, 381, 405, 429, 453, 477, 501, 525, 549, 573, 597, 621
Bel Air Mine, Idaho..... 613
Belcher Mining Co., Colo..... 159, 228
Belcher Mg. Co., Nev. 14, 38, 62, 88, 93, 134, 158, 206, 285, 302, 309, 326, 333, 350, 257, 374, 381, 397, 405, 422, 470, 493, 567, 590
Bell Company Mines, Ont..... 447
Belden Mine, Colo.....444, 373
Belgian Collieries, Use of Explosives in..... 364
Belgium, Collieries..... 291
Belgium, Iron..... 132
Belgium, Miners' Strike..... 280
Bell, F. A.....64, 88
Bellaire Nail Works, O.....179, 251
Bell, Lewis & Yates Coal Mg.Co., Pa. 62, 113
Belle of the Sage Brush..... 516
Belien, Chas. E..... 540
Bellevue Mine, Ore..... 135
Bell, Sir Lothian..... 324
Bell & Stephens Mill, N. Mex..... 326
Bellwether Mine, Cal..... 588
Belmont County Coal Mines, O., 113, 135, 422
Belmont Mills, W. Va..... 107
Belmont Mg. Co., Mont..... 182
Belt Line R. R. Tunnel..... 441
Bendigo, Australia, Mining at..... 29
Ben Hur Mg. Co., Cal..... 621
Benner's Prophesies of Future Ups and Downs in Prices..... 290
Benner, S., *Prophesies on Prices* ... 98
Bennett, Chas. A., Economy in Air Compression..... 290
*Bennett, C. A., Uses of Compressed Air..... 100
Bennett & Guillaume Mica Mines, B. C..... 519
Berg und Hattenwesen auf der Welt ausstellung in Chicago..... 339
Bergquist's Pat. Smoke Purifier..... 82
Berlin Iron Bridge Co., Conn., 12, 35, 59, 83, 87, 108, 112, 155, 204, 275, 299, 371, 395, 419, 467, 491, 540
Berliner Telephone Patent..... 487
Berry, William H., Furnace Feeder for Chain Grates, Pat..... 418
Bertha Zinc and Mineral Co., Va..... 419
Berthelot, M., Spectra of Argon..... 442
Bertrand & Theil's Pat. Steel Making 34
*Berwind-White Eureka Colliery, Electric Plant..... 508
Berwind-White Coal Co..... 203
Bessemer Fire Brick Co..... 611
Bessemer Furnaces, Ala..... 41
Bessemer Land and Improvement Co., Ala.....65, 563
Bessemer Medal..... 193
Bessemer Medal, British Iron and Steel Institute..... 193
Bessemer Mine, Minn..... 493, 613
Best & Belcher Mg. Co., Nev. 14, 23, 38 62, 110, 158, 543, 621
Best, W., Lighting Miners' Lamps, Pat..... 370
Bethlehem Iron Co. .194, 305, 251, 515, 563, 611
Beveridge, George..... 83
Bien, Joseph R., *Atlas of the State of N. Y*..... 602
Big Six Company, Colo..... 568
Bird-Coleman, Furnaces, Pa..... 563
Big Banta Mine, Colo..... 85
Big Bug Onyx, Air..... 204
Big Cottonwood Mine, Ariz..... 444
Big Evans Mine, Colo..... 255,516
Big Four Mine, Colo.....300, 589
Big Hole Mg. Co., Cal., 477, 453, 501, 525, 549, 573, 597, 621
Big Laramie Placers, Wyo..... 327
Big Six Combination, Colo..... 421
Big Stone Gap Improvement Co., Ky. 420
Bicknell, G. A., and Cramer, J. H., *Chemical and Metallurgical Handbook*..... 26
Bilgram, H., *Study of the Money Question*.....98, 122
Bimetallic League, France..... 306
Bimetallic League, Great Britain, 212, 330, 450, 618
Bimetallic Mg. Co., Mont.....158, 518
Bimetallic & Granite Mt. Mine, Mont..... 543
Bimetallism..... 193, 409, 457
Bimetallism, Germany..... 163
Bird, Thomas..... 131
Birmingham, Ala., Furnace Developments..... 558
Birmingham Boiler Works Co..... 587
Birmingham District, Ala..... 81
Birmingham Rolling Mill Co.,Ala. 65, 161. 348
Birney Mine, Cal..... 541
Birtley, Thomas H., Coal, etc., Cutting Mach. Pat..... 202
Bismarck Mine, Colo..... 516
Bismuth, Prices.....Weekly
Bismuth, Tasmania..... 519
Bison Mine, Colo..... 181
Bituminous Coal Market, New York, Weekly
Bituminous Coal, Meeting..... 232
Biwabik Mine, Minn..... 446, 517
Biwabik Ore Co., Minn....110, 470, 589, 613
Black Bell Mine, Col.....445, 520, 589
Black Diamond Coal Colliery, Pa.... 302
Black Diamond Coal Mine, Wash.... 231
Black Diamond Mine, Colo..... 85
Black Diamond Steel Works, Pa..... 59
Blackfoot Mg. District..... 542
Blackpool Tower, London..... 226
Black Girl Mine, Cal..... 542
Black Hawk Mine, Cal..... 60
Black Hills Gold and Silver Extraction Co., S. Dak..... 15
Black Jack Mine, Cal.....252, 396, 516, 549
Black Jack Mine, Idaho..... 542
Black Joe Mine, Colo..... 37
Blackman's Pat. Electrolytic Process. 610
Black Oak Mine, Cal..... 420
Black Prince Mine, Colo., 252, 516, 541, 612
Black Mountain Quarry, Vt..... 87
Black Wonder Mine, Colo..... 85
Blair Con. Mines, Cal..... 156
Blair Iron and Coal Co., Pa..... 207
Blake, Henry H., Ore Crusher, Pat.. 442
Blake, Wm. P..... 293
Blandy, John F., U. S. Geological Survey.....27, 35
Blaine Mg. Co., Wash..... 544
Blank Form for Pig Iron Samples.... 220
Blast Furnace and the Chemist..... 537
Blast Furnace Construction, Upper Silesia..... 579
Blast Furnace Gas for Gas Engines, 49, 52
Blast Furnace, Gas in Engines..... 99
Blast Furnace, Pat..... 202
Blast Furnace Practice, Chemistry in 530
Blast Furnace Slag, Cement from.... 505
Blast Furnace Slag, Sulphur and Magnesia in 52, 75
Blast Furnace Slag, Utilizing..... 2
Blast Furnace Top, Richards' Pat.... 82
*Blast Furnaces, Early Georgia..... 585
Blast Furnaces, Gas Purifier, Pat ... 226
Blast Furnaces, Smoke Consuming Attachment, Warner's Pat..... 514
Blauvelt, William H..... 179
Bless Colliery, Pa..... 230
Blewitt, Patrick, Coal, Pa..... 206
Blende, Occurrence of in Lignite 248
Bloomsburg Iron Co., Pa..... 107
Blowpipe Analysis..... 387
Blue, Archibald, Mineral Production of Ontario..... 315
Blue Bell Mine, B. C..... 303
Blue Bird Mine, Colo.....180, 564
Blue Canyon Mine, Wash..... 351
Blue Diamond Granite Co., Ga..... 277
Blue Hill Granite Co., Mass..... 613
Blue Jay Mine, Cal..... 541
Blue Jay & Whippoorwill Mine, Colo. 564
Blue Light Mg. Co., Cal..... 372
Blue Mt. Granite Co., Vt..... 159
Blue River Phosphate Co., Fla..... 373
Blumenberg, Henry, Jr., Electrolysis, Pat.....346, 370
Board of Trade, Easton, Pa..... 251
Bodie Con. Mg. Co., Cal..13, 60, 88, 108, 132, 156, 180, 204, 276, 300, 325, 348, 372, 396, 420, 468, 495, 564, 573, 588, 621
Bodie Miners' Union, Cal..... 108
Bodie vs. Standard Mg. Co..... 541
Bodkin Rock Quarry, Conn..... 157
Bogart Mine, Colo.....276, 396, 589
Boggy Creek Mines, Oklahoma..... 591
Bohn Mine, Colo.....205, 300, 349, 421
Boise Basin, Idaho..... 133
Bolckow, Vaughan & Co., England.. 257
Boleo Mg. Co., Mexico, Report..... 512
Bolivia, Language of the Aborigines.. 370
Bolivian Mining Industry..... 438
Bolly Field, Ga..... 492
Bolton, Reginald. *Motive Powers and Their Practical Selection*..... 387
Bon Air Mg. Co., Colo. 13, 300, 396, 469, 518, 612
Bonanza Mine, Idaho..... 397
Bonanza Mine, Oregon..... 230
Bonanza Mine, Transvaal..... 40
Bonanza Slide Dft. Mg. Co., Cal...397, 621
Bond Issue..... 498
Bonds, New U. S..... 234
Bond Sales..... 402
Bonebill, E., Use of Waste Gases in Puddling Process, Pat..... 370
Bonehill, L. R., Copper Furnace, Pat. 466
Bone Hill Phosphate Co., Fla 61, 565
Borchers, Dr W., *Electro-Metallurgy*. 602
Borggreve, B., *Silesian Mineral Industry*..... 483
Boride of Carbon..... 11
Boring Rods..... 394
Borneo, Coal in Brunei..... 579
Boron, Carbon Battery 58
Boron, Displacement of Carbon by... 549
Boston & Colo. Smelting Co., Colo.... 285
Boston & Cripple Creek Mg. Co., Colo 468
Boston Mine, Cal..... 276
Boston Mining Stock Market ...Weekly
Boston Mining Stock Quotations, Weekly
Bost. & Mont. Mg. Co., Montana .38, 197, 381, 386, 434, 435, 566, 573, 597, 621
Boston & Nova Scotia Coal Co., N. S.. 63
Boston Society Civil Engineers....12, 155, 324, 443
Boston Stock Market, 1894..... 9
Botin Mine, Colo..... 612
Botting, Wm. H., Pat..... 226
Boulder Gold Mines, Colo..... 84
Boulder Mill, Idaho 229
Boulder Mine, Cal..... 204
Boviard & Seyfang Mfg. Co., Pa..... 35
Boyd Coal Co., Pa..... 545
Boynton's Pat. Power Hammer..... 539
Bradley, W. H., Cupola Furnace, Pat..... 466
Brandis, Sons & Co., F. E., N. Y..... 515
Brandt, Randolph..... 419
Branner, J. C., Gold in the Highlands of Brazil..... 55
Brazil, Gold in the Highlands..... 55
Brazil, Iron and Gold in..... 339
Brazil, Minerals..... 125
Brazil, Mines of..... 255
Brazil, New Loan..... 235
Breece Hill Section, Colo.....61, 109
Brett, Walter W..... 371
Bretz, George M..... 371
*Brewer, Wm. M., Ducktown, Tenn., Copper Mining Dist..... 271
Brick Kiln, Pat..... 274
Brick Kilns, Holman's Pat..... 58
Brick Kiln, Monroe's Pat..... 34
Brick or Tile Kiln, Pat..... 202
Brick Pavements..... 578
Bridge, Suspension, N. Y. and N. J... 225
Bridge, Suspension, Theory of..... 121
Brier Hill Iron & Coal Co., O..... 131
Bright Diamond Mine, Colo..... 445
Brightman Stoker..... 59
Brilliant Black Slate Co., Pa..... 159
Brinker, John M..... 41
Briquette, New Form..... 127
Bristol Co..... 611
Bristol, Elizabethtown & N. Carolina R. R..... 588
*Bristols Recording Ampere Meter . 273
British Aluminum Co..... 21, 471
British Columbia Mines..... 128, 255
British Consols, Price..... 139
British Guiana, Gold..... ....16, 40, 75, 323
British House of Commons, on Monetary Conference..... 210
British Iron and Steel Institute, Bessemer Medal..... 193
British Iron and Steel Institute, Meeting..... 443
British Patent Office..... 561
British Railroads..... 259
British South Africa Co..... 112, 117, 165
British vs. American Iron and Steel.. 170
Brodie Cyanide Mill, Colo.....132, 252, 468
Broja, R., *Coal Mining in the U. S...* 99
Broja, R., *Steinkohlenbergbau, etc*.... 290
Broken Hill Proprietary Co., N. S. W. 88, 111, 165, 237
Broken Hill Silver Mines, N. S. W., 189, 237, 410, 413
Bromine Treatment of Gold Ores .. 608
Bromo-Cyanide Process, Gold Extraction..... 510, 602
Bromo-Cyanide Process, Mulholland's..... 531
Brooke Iron Mine, Pa..... 63
Brooklyn Navy Yard, N. Y..... 444
Brooklyn Polytechnic Institute..... 131
Brooklyn Strikes..... 73
Brooks Locomotive Works, N. Y..... 12
Brown Bear Mining Co., Cal..... 468
Brown-Bonnell Iron Co., O.... ....12, 595
Brown, Geo. B..... 324
Brown Hoisting and Conveying Machine Co., O..... 348
Brown Horseshoe Furnace..... 36
Brown, M. M., Mexico..... 275
Brown, R. G., Mont..... 324
Brown & Douglass Mine, Nev..... 613
Browne, Arthur B., Manufacturing Chromate of Lead. Pat..... 466
Browne, R. E., California Placer Gold..... 101
Brownell Slate and Flagging Co., N. Y..... 15
*Brownley's Injector..... 513
Brown's Pat Horseshoe Furnace. ... 106
Brox, Vidnes & Allen, Manganese Copper Alloy Manufacture. Pat... 370
Brunck Coke Oven..... 250
Brunhes, B., *Cours Elementaire de l'Electricite*..... 555
Brunner, Mond & Co., Great Britain, 193, 213
Brunswick Consolidated Gold Mg. Co., 21, 309, 356, 357, 375, 381, 405, 429, 453
Brunswick Lode, Nev..... .590, 613
*Brunton's Pocket Transit..... 464
Bryson, Jones & Fraser, Improvement in Distilling Oil Shale. Pat... 370
Buchanan Mine, Cal..... 60
Buchanan, Pat. Separator..... 11
Buckeye Bell, Colo..... 612
Buckeye Glass Co., O..... 540
Buckley, Martin..... 35
Buck Mountain Vein, Pa..... 86
Bucyrus Steam Shovel and Dredge Co., O..... 108, 179
Buel, S., Jr., Rapid Transit Problem. 147
Buena Vista Mine, Colo..... 60, 180, 228
Buffalo Car Mfg. Co., N. Y..... 75
Buffalo Coal Market.....Weekly
Buffalo Iron Market.....Weekly
Buffalo Coal Thieves..... 64
Buffalo Coal Trade in 1894..... 136
Buffalo Iron Trade, 1894..... 8
Buffalo Furnace, N. Y..... 83
Buffalo Mine, Idaho..... 182
Buffalo Mines, Mich..... 517
Buffalo Nat. Gas Fuel Co., N. Y..... 518
Buffalo, Rochester & Pittsburg Railroad..... 371
Buford Mines, Ga.....492, 517
Building Contract, Damages for Delay, Legal Decision..... 178
Bullets, Penetration in Snow..... 219
Bull Dog Mine, Ariz..... 156
Bullion-Beck & Champion Mg. Co., Utah..21, 39, 135, 165, 195, 231, 279, 285, 303, 327, 357, 372, 381, 398, 405, 423, 429, 446, 453, 477, 494, 501, 525, 549, 573, 597, 621
Bullion Con. Mg. Co., Cal..... 381
Bullion Mine, Colo..... 516
Bullion Mg. Co., Nev..14, 61, 117, 119, 143, 167, 182, 191, 206, 213, 237, 278, 597, 621
Bullion Sampler. Pat..... 370
Bullock, Milan C., Steam Engine. Pat.....202, 250
Bulwer Con. Mg. Co., Cal..108, 132, 156, 180, 227, 252, 280, 285, 325, 348, 372, 396, 420, 468, 495, 564
Bunker Hill & Sullivan Mg. Co., Ida. 373, 469, 542, 613, 615
Bureau of Am. Repub., Salvador.....194
Burgess, Prof. Edward..... 275
Burgum, W. H., Electrolysis, Pat.. 274
Burner, Hydrocarbon. Pat.. .. 250, 346
Burner for Oil. Pat..... 226
Burson's Pat Stamp Mill..... 58
Burton, George D., Ore Smelting Electrically. Pat..... 370
Bushnell, Robert G..... 12
Bushwhacker Mg. Co., Colo..157, 228, 396
Business Failures, 1894..... 19
Business Forms..... 335
Butterfly Mine, Cal.....325, 549
Butler County Oil Fields, Pa..... 423
Butte & Boston Mg. Co., Mont..... 160
Butte District Mg. Co., Mont..... 182
Butte, Mont., Powder Explosion.... 61
Butte Sampling Works, Mont..... 470
By-Product Coal Ovens..... 505

C

Cadmus Gold Mining Co., Cal..... 276
Cahaba Southern Mg. Co., Ala..... 611
Calcining Machine. Pat..... 202
Calcium, Carbide..... 245
Calcium Carbide Process, Willson's Pat..... 610
Calcium Carbide, Properties of..... 323
Caldwell, John K., Pat..... 274
Caledonia Mine, Colo.....85, 109, 157, 349
Calhoun Mine, Colo..... 132
California Coast Drainage, Geology of 123
California Debris Commission 381, 429, 492, 541, 575
California Miners' Assn...501, 515, 549, 612, 621
California Miners' Injunction Bill.... 237
California Mines Inspection Bill..... 237
California Mining Co., Colo..... 325
California Placer Gold..... 101
California Quicksilver.....68, 84
California State Mining Bureau, Report..... 99, 299
Calumet & Hecla Mg. Co. ...112, 182, 397, 405, 446, 517, 542, 549, 573, 597, 621
Callaghan & Preston Mine, Wash..... 15
Callaghan, William J., Safety Lamp. Pat..... 323

Callahan, John..... 491
Calliope Mine, Colo.....349, 516
Camas No. 1 Mine, Idaho..... 277
Camas No. 2 Mine, Idaho..... 37, 86
Cambria Iron Company, Pa., 107, 347, 540, 563
Cameron Mg. Co., Colo..... 60
Camp, Horace M. Pat..... 202
Campbell & House Combination Freight and Humane Stock Car Co., Md..... 371
Campbell-Zell Co., Md..... 444
Canadian Copper Co., Ont..... 231, 399
Canadian Society, Civil Engineers, 35, 59, 106, 203, 251, 491
Canada, Foreign Commerce..... 211
Canada, Foreign Trade..... 211
Canada Phosphate Mines..... 614, 615
Canada, Pig Iron..... 514
Canadian Mineral Production in 1894, 409
Canada, Mineral Production..... 98, 484
Canal, Baltic & North Sea..... 220
Canal Engineers, Board of..... 345
Canals, New York, Electricity on..... 106
Canal, Nicaragua..... 442
Canal, Nicaragua, Election of Directors..... 439
Candelaria & Durango Mg. Co., Mex. 577
Cane Iron Mine, Ga..... 493
Canfield's Pat. Gold Separator..... 539
Canning Mine, Col..... 541
Cannon Gold Mg. & Milling Co., Utah..... 514
Cannon Gold Mg. Co., Utah.....39, 183
Cannon Shaft, Utah..... 279
Canton Iron Co., Minn..... 493
Canton Iron Co., Minn..... 373, 446
Canton Mine, Colo..... 421
Capital Shaft, Colo.....61, 421
Capo-Farad Battery & Appliance Wks..... 467
Caracristi, C. F. Z..... 515
Carbon-Boron Battery..... 58
Carbon Boride..... 11
Carburetor, Cook's Pat..... 34
Carbon for Electrical Purposes, Pat. 442
Carbon, Idaho, Placers..... 229
Carbon Iron & Steel Co..... 587
Carbon in Steel, Condition of..... 8
Carbon in Steel, Estimating..... 581
Carburetor, Pat..... 202
Carburization Process Schneider..... 154
Carefulness as Evidence in Case of Injury, Legal Decisions..... 297
Cargo Muchacho Mill, Cal..... 420
Caribbean Mg. Co., Repub. of Colombia..... 615
Caribbean & Montezuma Mg. Co..... 492
Cariboo Country, B. C..... 519
Carissa Gold Mine, Wyo..... 254
Carril Mine, Mont.....14, 613
Carrol Bros. Mine, Idaho..... 517
Carlson, Gold Amalgamator, Pat..... 225
Caroline Mg. Co., Colo.....115, 492
Caral, J. E., Chromite Mining in New South Wales..... 603
Carnegie, Andrew..... 491
Carnegie Iron Co., Tenn..... 141
"Carnegie Process"..... 194
Carnegie, Phipps & Co., Armor..... 194
Carnegie Steel Co., Pa...12, 35, 60, 107, 208, 305, 333, 371, 495, 563
Carnegie Steel Process, New..... 191
Camas No. 2 Mine, Idaho..... 326
Carney, W. A., *Secretary's Manual*.. 123
Carnot, Adolphe..... 347
Carskaden, Delos, Recovery of Precious Metals from their Ores, Pat... 370
Carson Coal Washery, Pa..... 251
Carson Mint 283, 309, 330, 578, 402, 546
Carson River Placer Mg. Co., Nev. 381, 397
Carson River Placer Mining and Dredging Co., Meeting..... 453
Cartagena, Spain, Iron Market..... 42
Carter, John W., Magnetic Ore Separator, Pat..... 442
Carthage Marble and White Lime Co., Mo..... 158
Carves, M., Coke Ovens..... 227
Cascade District, Wash..... 591
Casgrain, Edmond H., Apparatus for Casting Metals, Pat..... 274
Caspar Oil Refinery, Wyo..... 351
Cast Iron, Study of the Physics of ... 294
Casting Metals, App. for, Pat..... 226
Casting Metals, Pat..... 292
Cashman's Brilliant Reward Co., W. Australia..... 429
Cas ings, Increasing Soundness..... 610
Castner's Pat. Making Cyanides 610
Castner's Pat. Preparing Alkaline Cyanides..... 586
Catalpa Mg. Co., Colo..... 141
Catherine Mine, Colo..... 157, 520, 564
Catlitt, Charles..... 131
Catskill Mine, Cal..... 84
Caucasus, Copper Deposits..... 106
Caucasus Mt. Petroleum..... 250
Caustic Soda, Mfg. of. Pat..... 226
Cave Mg. Co., Utah..... 327
Cavender's Creek, Ga..... 493
Cayley, Arthur..... 107
Cedar Creek District, Wash..... 518
Cellulose, Cornstalk..... 562
Cement, Adhesion to Brick..... 579
Cement from Blast Furnace Slag..... 595
Cement Calcining, Navarro's Pat..... 31
Cement Mortar, Stamp Sand in...173, 218
Cement, Portland..... 578
Cement, Portland, Michael's Tests... 32
Centennial Eureka Mining Co., Utah, 102, 111 117, 135, 189, 195, 285, 357, 375, 381, 405, 429, 453, 477, 501, 525, 549, 573, 597, 621
Centennial Gravel Mg. Co., Cal., 429, 501, 525, 549, 573, 597, 621
Centennial Group, Colo..... 156
Central Colliery, Pa..... 206
Central Iron Works, Pa..... 347
Centre Mine, Cal..... 588
Central Mg. Co., Mich....116, 158, 296, 309
Central Railway Club Meeting....275, 371
Central Trust Co., N. Y..... 467
Centrifugal Ore Separator Pat..... 442
Centrifugal Separator, William's Pat 562
Challenge Con. Mg. Co., Nev., 38, 213, 237, 285, 309, 333, 357, 621
Chalon, P. F., *Aide Memoire du Mineur*..... 123
Champion-Empire Mg. Co., Colo..... 13
Champion Iron Mine, Mich..... 14
Champion Mg. Co., Cal, 102, 180, 195, 285, 309, 357, 381, 405, 429, 453, 477, 501, 516, 525, 549, 573, 597, 621
Champion Reef Mg. Co., India..... 93
Chance Mine, Colo..... 445
Chandler Iron Mine, Minn. 181, 470, 493, 566
Channing, J. Parke, Compressed Air for Pumping 363, 611
*Channeling Machine, New..... 534
Chaplin, Prof. W. S. German Engineering Schools..... 299
Chapparal Mine, Ariz..... 108
Charleroi Coal Co., Pa..... 254
Charleston Phosphate Market..... 44
Charlotte Furnace, Pa..... 35, 83
Charlotte Mg. Co., Idaho.... 182, 229, 326
Charbers Towers Field, Queensland.. 471
Chase-Grant Armor Plate Trial..... 298
Chatterwana Mg. Co., Mo..... 517
Chattanooga Pipe Foundry Co., Tenn. 113
Chattanooga Southern Ry., Ala..... 179
Chattel Mortgage, Lien on Machinery, Legal Decision..... 441
Chemical Analysis of Inorganic Substances..... 98
Chemical Analysis, Instruction in.... 242
Chemical Analysis, Qualitative..... 147
Chemical Gold Mg. Co., Cal..13, 309, 333, 357, 381, 405
Chemical Industry Society, New York Section..... 35
Chemical Market, Chili..... 548
Chemical Market, New York.....Weekly
Chemical and Metallurgical Handbook..... 26
Chemist and the Blast Furnace..... 537
Chemistry in Blast Furnace Practice. 530
Chemistry, Short History..... 98
Chemung Mine, Colo..13, 61, 109, 205, 300
Cherry Valley Furnace, O..... 347
Chesapeake & Ohio R. R.....121, 165
Chestatee Pyrites Co..... 179
Chester Mine, Ga..... 565
Chestnut Coal Mines, Mont..... 278
Chia Pas Mining Co., Mex..... 303
Chicago Coal Market.....Weekly
Chicago & Cripple Creek Tunnel Co., Colo..... 421
Chicago Iron Market.....Weekly
Chicago Iron Trade, 1894..... 8
Chicago & Leadville Development Co., Colo.....205, 568
Chicago & Little Rock Mg. Co., Ark. 515
Chicago Pumice Stone Co., Utah..... 63
Chicago Shipbuilding Co., Ill..... 160
Chihuahua Mg. Co., Mex..... 45
Chile, Chemical Market..... 572
Chile, Copper Market.....451, 499, 571
Chile, Mineral Fuel..... 609
Chile, New Loan 235, 571
Chile, Resumption of Specie Payment.....378, 546
Chile, Silver Sales..... 354
Chilean Copper Market..... 547
China, Ancient Coinage..... 125
China, Effect of War on Price of Silver..... 266
China, Foreign Trade..... 595
China, Gold Loans.....115, 139
China-Japan Treaty.....361, 525
China-Japan War..... 34
China Loan..... 19
Chinese Loan,.....403, 475, 547
Chilling Test-pieces..... 610
Chlorate of Potash, Mfg. of, Pat..... 442
Chloride Mine, Cal..... 349
Chlorination or Cyaniding..... 491
Chlorine Making, Process, Pat..... 394
*Chlorine, Obtaining, Mond's Process. 31
Choctaw Coal & R. R. Co., I. T..... 208
Chollar Mg. Co., Nev., 14, 38, 62, 110, 134, 182, 206, 253, 278, 301, 350, 374, 397, 493, 501, 517, 525, 543, 567, 590
Chota-Nagpur District, India..... 87
Christ, Isaac, Ore Separator, Pat..... 226
Christiani, Louis R., App. for Mfg. of Oil & Water Gas, Pat..... 346
Christmas Mine, Colo.....349, 495, 589
Christmas' Pat. Process of Treating Certain Ore..... 539
Chromates of Iron, Study of..... 342
Chromate Mining, N. S. W..... 603
Chrome Industry, N. S. W..... 447
Chromium Determination in Chrome Ore..... 390
Chromium, New Researches..... 106
Chuckawalla Mts., Cal..... 108
Church Gold Mining Co., Cal..... 405
Church, John A..... 491
Church Mine, Cal..... 36
Cimarron Mine, Colo..... 421
Cincinnati, Engineer's Club..... 587
Cincinnati Iron Co., Minn....37, 110, 397
Cinco Senores Mining Co., Mexico.... 255
Cinder Utilizing, Roberts' Pat..... 106
Cinnabar King Mine, Cal..... 372
Cinnabar, Texas..... 293
Citico Furnace Co., Tenn..... 119
City & Suburban Mine, Transvaal..... 519
City & Suburban Ry., Md..... 251
Civil Engineers, American Society, 12, 59
Civil Engineering, Rankine's Notes on..... 218
Civil Engineers' Society of St. Paul, Meeting.....251, 347, 467
Claims, B. C., Sale of..... 398
Clapp & Co., Souvenir..... 434
Clark, Edward, Method of Determining Chromium in Chrome Ore..... 390
Clark Iron Co., Minn..... 493
Clarke's Pat. Air or Electro-Motor... 490
Clarke & Walker's Pat. Stone Working Tool..... 82
Clark Smelter, Mont..... 206
Clarkson Sampler..... 59
Clase's Pat. Stamp Head Attachment..... 490
Clay Mill, Pat.....202, 226
Clear Spring Coal Co., Pa..... 494
Clear Creek Gold Mg. and Water Co., Colo..... 13
Clearfield Coal Operator Ass'n..... 280
Clearfield Firebrick Co., Pa..... 107
Clearing House, International Monetary..... 121
Clearwater Places, Idaho..... 542
Clenwell, J. E., Estimation of Cyanogen in Impure Solutions..... 584
Cleveland Civil Engineers' Club Meeting.....371, 491, 587
Cleveland Cliff Iron Co., Mich..229, 347
Cleveland Iron Mg. Co., Mich..... 37
Cleveland Mine, Colo...109, 325, 469, 541, 589
Cleveland Mining Co., Utah..... 207
Cleveland Rolling Mill Co..... 587
Cliff Mine, B. C..... 614
Clifton Con. Mine..... 84
Climax No. 1, Mine, Colo..... 276, 613
Clinton Mill, Pa..... 515
Clippinger Mine, Ga..... 565
Cloptin Mine, Ga..... 612
Cluff, Chas. C..... 611
C. M. Fraction, Colo..... 61
Coal, Alabama..... 581
Coal, Anthracite, Report of 2nd District..... 206
Coal, Australia..... 56
Coal, Brown, Austria-Hungary..... 34
Coal, Brunei, Borneo..... 579
Coal, Clay County, Mines, Ind..... 469
Coal and Coal R. R. Stocks.....Weekly
Coal and Coke, Cost and Selling Price 145
Coal, Collieries of Belgium..... 291
Coal, Colorado..... 36
Coal Contract, Grand Trunk.....145, 161
Coal, Combustion of, Pat..... 418
Coal Conveyer, Collins' Pat..... 539
Coal Creek, Tenn..... 611
Coal Near Madras, India..... 414
Coal Cutting Machine, Pat..... 202
Coal Dust Binder, Krah's Pat..... 34
*Coal Dust Burning, Frideberg Apparatus..... 127
Coal Drill, Pat..... 246
Coal Drying and Preparing, Pat..... 178
Coal Dust Feeder for Furnace, Pat... 370
Coal Dust, Occluded Gases..... 58
Coal Exports and Imports, Germany. 77
Coal, Faroe Islands..... 130
Coalfield, Carpano, Austria..... 54
Coalfields, San Carlos, Texas..... 558
Coalfields, W. Va..... 423
Coal, France..... 285
Coal, Greece..... 489
*Coal, Handling, Electricity in..... 188
Coal Handling Machinery, Pat..... 226
Coal, Japan..... 111
Coal Land, Bibb County, Sale of, Ala..... 444
Coal Lands, Tax on..... 438
Coal Market, Buffalo.....Weekly
Coal Market, Chicago, in 1894..... 7
Coal Market, Chicago.....Weekly
Coal Market, New York.....Weekly
Coal Market, Pittsburg.....Weekly
Coal Market, Shanghai, China, 65, 89, 137, 281, 400, 448, 592
Coal Mine at Baskett, Ky..... 205
Coal Mine Inspection, Pa..... 112
Coal Miners' Convention, Dubois, Pa. 351
Coal Miners' Convention, Tenn..... 275
Coal Mines, Electric Lamps in..... 316
Coal Mines in South Wales..... 392
Coal Mining in India..... 219
Coal Mining in Russia..... 367
Coal Mining in the Transvaal, So. Africa..... 461
Coal Mining, Trespass in..... 507
Coal Miners' Unions..... 241
Coal Mining in the U. S..... 99
Coal Miners' Wages, Pa..... 135
Coal Mines, Washington, Inspector's Report..... 147
Coal, Nova Scotia.....16, 40
Coal Port, New, New South Wales 202
Coal, Poland..... 130
Coal, Price of..... 218
Coal Prices, Pa..... 446
Coal, Price of, lowered..... 313
Coal Prices, Wyoming..... 111
Coal Production, France..... 207
Coal Production of Kentucky in 1894. 333
Coal Production of Vancouver..... 273
Coal, Prussia..... 534
Coal and Railroad Companies, West Virginia..... 121
Coal Receipts, San Francisco..... 352
Coal Screen, Pat..... 226
Coal Separator, Richardson's Pat..... 58
Coal Shipments, Erie, Pa..... 136
Coal Shipments.....Weekly
Coal, South Africa..... 226
Coal, Spontaneous Combustion, Prevention of, Pat..... 370
Coal Statistics..... 531, 554
Coal Statistics in France and Belgium..... 602
Coal Storage Plants, Philadelphia & Reading..... 605
Coal Supplies of Polk County, Iowa.. 149
Coal Tests of Birmingham Coals..... 200
Coal Trade, Anthracite, 1894..... 3
Coal Trade, Buffalo, in 1894..... 136
Coal Trade Review.....Weekly
Coal Trade, Russia..... 101
Coal Used in Desilverizing Lead, 171, 195, 267, 291
Coal Washing..... 34
Coal Washer, Giles' Pat..... 610
Coal Washer, Wood & Burnett's Pat. 154
Coal Washer, Ramsey's Pat..... 106
Coal, Weighing of..... 441
Coal, Western Australia..... 605
Coan, Capt. Alonzo..... 540
Cobalt, Australia..... 49
Cochiti District Mines, N. Mex., 326, 397, 420
Cochrane's Pat. Machine for Compressing Fuel..... 610
C. O. D. Mine, Col.....60, 180, 205, 421, 495
Cœur d'Alene Mines, Idaho, 45, 194, 386, 433, 481, 529, 553
Cofrode & Saylor, Pa..... 59, 107
Cohoes, N. Y., Rolling Mill Employees..... 587
Cohansey Glass Co., N. J..... 107
Coinage, Ancient, of China..... 125
Coinage, Great Britain..... 67
Coinage, Germany..... 115
Coinage, U. S. Mint..... 19, 43, 570
Coin's Financial School..... 457
Coin's Financial Fool..... 531
Coins, Minor, Latin Union..... 405
Coinage, Nickel, French Exports..... 117
Coins, Prices.....Weekly
Coe's Pat. Amalgamator..... 11
Coke, Alabama..... 581
Coke and Coal Loader, Pat..... 226
Coke, Connellsville, 1894..... 98
Coke, Connellsville.....Weekly
Coke and Coal, Cost and Selling Price, 145
Coke Ovens, By-Product..... 505
Coke Oven Gases, Utilization of..... 392
Coke Oven, Pat.....418, 466
Coke Oven, The Brunck..... 250
Coke Production.....305, 400
Coke, Mfg. of..... 346
Cook's Pat. Carburetor..... 34
Coolgardie Goldfields, W. Aus..... 520
Coombs, Crosby & Eddy, N. Y..... 179
*Cooney Mining Dist., New Mexico, 343, 388, 590
Colen Gold Fields, India, 289, 399, 495, 615
Colburn Claim, Colo..... 16
Colchis Mg. Co., N. M..... 85
Cole Iron Furnaces, Ala..... 324
Coleman-Shields Iron Co., O..... 113
Collet, Harold, Carburetor, Pat..... 202
Collier & Lewis Mining Group, Colo.. 325
Collier's Pat. Coal Conveyer..... 5-9
Collins Company, Conn..... 324
Collin, Franz J., Horizontal Coke Oven, Pat..... 466
Collins, G. H..... 155
Collins, Phillip, Pa..... 203
Colorado Central Mining Co., Colo.... 228
Colorado, Coal..... 36
*Colorado, Cripple Creek Gold Mines, 97, 103
Colorado Fuel and Iron Co., Colo.... 107, 563
Colorado Mg. Co, Colo..... 133
Colorado Mineral Surveys.....180, 516, 565
Colorado-Montana Development Syndicate..... 309
Colorado Mg. Congress..... 563
Colorado Scientific Society..... 587
Colorado Smelting Co., Colo..... 141
Colorado Smelting Co., Mont..... 59
Colorado Springs Board of Trade Mining Exchange..... 572
Colorado Springs Mining Stock Exchange..... 572
Colorado Springs Mining Stock Quotations.....Weekly
Colorado Springs Stamp Mill, Colo.. 468
Colo., Wyo. & Great Northern R. R., Ga..... 565
Color, Effect of Colored Light on... 370
Color Making by Electrolysis..... 54
Columbia College, Course of Lectures on Electricity..... 251
Columbia Iron & Steel Co., Pa..... 443
Columbia Mine, Colo..... 492
Columbia River Gold Mg. Co., Wash. 518
Columbia River Placers, Wash..... 518
Columbia Rolling Mills, Pa..... 347
Columbia & Winona Mg. Co., Colo.. 421
Columbian Talc Co., New York..... 470
Columbus, Hocking Valley & Toledo R. R., O.....213, 429
Columbus Mine, Colo.....300, 565, 589
Combination Mining Co., Colo..... 228
Comet Mine, Cal.....108, 156
Comet Mine, Alaska..... 12
Coming Wonder Mine, Colo..... 301
Commercial Law..... 557
Commerce and Navigation of the U.S. 267
Commissioner of Mines of Colorado.. 361
Commissions on Sales..... 508
Commission on Sale of Oil Land, Legal Decision..... 440
Commodore Tunnel, Colo..... 300
Composite Steel Plate, Pat..... 394
Compressed Air in Mining, Chas. C. Hausen..... 220
Compressing Air, Pat..... 250
Compressor, Air, Regulator for, Pat. 250
Compressor, Hydraulic Air, Pat..... 226
Comtes, Wm. M..... 611
Comstock Mines Pay-rolls, Nev...158, 206
Comstock Tunnel Co., Nev.....401, 613
Concentrator, Beer's Pat..... 11
Concentrator, Glasman's Pat..... 610
Concentrator Mumma's Pat..... 539
Concentrator, Montgomery's Pat..... 11
Concentrator, Pat.....202, 418
Concentrator for Precious Metals, Pat..... 250
Concentrating Ores, Pat..... 202
Concord, N. H., Land & Water Power Co..... 299
Condemning Land, Legal Decision... 297
Condensation of Blast Furnace Fumes 298
Condict, Herbert, Storage Battery.... 224
Conditions of the Iron Trade..... 601
Conference, Monetary, Prussia..... 457
Confidence Mine, Cal..... 612
Confidence Mg. Co., Nev..71, 95, 119, 143, 167, 213, 191
Confidence Mine, N. Mex.....62, 125, 590
Congress, Adjournment.....234, 258
Congress and Currency..... 162
Congress, Discussions..... 138
Congress Mine, Ariz..... 444
Congress, Silver in..... 187
Conley's Pat., Metallurgical Furnace.. 539
Conley, Michael R., Process for Making Iron and Steel, Pat..... 220
Connemara Mine, Colo..... 250
Connell Coal Breaker, Pa..... 238

Connellsville, Pa... 515
Connellsville Coke, 1894..... 98, 305
Connellsville Coke... Weekly
Connellsville Gas Coal Co., Pa... 189
Connor Creek Mine, Ore..... 183, 374
Constellation Mg Co, Utah..... 159
Consideration for Promissory Note... 57
Con. Asphalt Co., Ky..... 37
Consolidation Coal Co., Md. 69, 165. 205, 518
Co. California & Virginia Mg Co., Nev., 14, 38, 62, 69, 86, 102, 110, 134, 141, 158, 165, 187, 195, 525, 253, 285, 302, 304, 350, 357, 374, 381, 397, 405, 423, 429, 453, 470, 477, 495, 501, 543, 519, 566, 573, 590, 597, 621
Consolidated N. Y. Mg. Co., Nev., 203, 213, 237, 285, 309, 333, 357
Con. Steel and Wire Co..... 540, 587
Contract, Abandoned, Rights Under.. 129
Contract, Accident to Machinery..... 105
Contract, Mining, Assignment of..... 274
Contract, Breach of..... 273
Contract, Damages for Breach..... 34
Contract, Mining, Construction..... 11
Contract of Sale..... 219
Contract, Specific Performance of.... 178
Continental Mine, Pa..... 302
Continental Oil Co., Colo..... 420
Convention of Railroad Commissioners..... 467
Conveyor, Pat... 418, 442, 466
Converter, Improved..... 486
Converse Comm., George A., U. S. N. 468
Conveyance of Mining Claim, Legal Decision..... 446
Co-operative Experiment, Morning Mine, Idaho..... 25, 27
Co-operative Granite Co., N. Y..... 86
Co-operative Granite Co., Vermont.. 611
Cooper, A., Metal Mixers of the Northeastern Steel Co.. 557
Cooper Creek Improvement, N. J... 35
Cooper, Peter..... 193
Copake Iron Works, N. Y..... 107, 179
Copeland, Charles W..... 155
Copper Assaying at Lake Superior, 369, 387
Copper Cliff Mine, Ont..... 399
Copper and Copper Matte Assays..... 602
Copper Creek District, Wyo..... 423
Copper Deposits, Caucasus, Russia... 106
Copper Deposits, Limogardi, Greece.. 11
Copper, Electrolytic Process for Producing, Pat..... 442
Copper, Elimination of Impurities from... 512
Copper Exports..... Weekly
Copper Flat Mining Dist. New Mex.. 229
Copper Imports, France..... 213
Copper, Iodide Assay..... 124, 170
Copper Market..... Weekly
Copper Market of the World..... 458
Copper Mines, Argentina..... 555
Copper Mine, Ducktown, Tenn..... 265
Copper Mine, Ga..... 109
Copper Notes, Portugal..... 453
Copper Ores, Persia..... 82
Copper Ores in Serpentine, Origin.... 560
Copper Ore Shipments, N. Mex..... 470
Copper Prices..... 457
Copper Producers' Committee.. 163, 379
Copper Producers' Report..... 571
Copper Production of the U. S. in 1894..... 70, 410
Copper Pyrites, Kernel Roasting..... 104
Copper Queen Con. Mg. Co., Ariz., 141, 195, 285, 317, 381, 405, 429, 446, 453, 477, 501, 525, 549, 573, 597, 621
Copper Refining, Pat..... 202
Copper Rock Mine, Colo..... 228
Copper Rock Placers..... 516
Copper Smelting, Brick Bottom Reverberatory Furnace..... 363
Copper Smelting Furnace, Pat..... 466
Copper, Spain..... 458
Copper Stock, Boston, 1894..... 9
Coptis, Nev., 189, 195, 285, 357, 381, 405, 429, 453, 477, 501, 525, 549, 573, 597, 621
Coquimbana Manganese Mine, Chile. 615
Corlett, G. S., Electricity as Applied to Mining..... 271
Cornell, Lewis T., Hydrocarbon Burner, Pat..... 346
Coronado Mg. Co., Colo..... 228
Corning Steel Co., Ind..... 59
Cornwall Ore Banks Co., Pa..... 324, 471
Cornwall, England, Miners..... 241
Cornwall, Tin Mines..... 58, 501
Cortes, Augusto Orego, *La Industria del Oro en Chile*..... 435
Corundum Deposits, Georgia..... 558
Coshocton Coal Mines, O..... 110
Cottonwood Mg. Co., Ariz..... 611
Cotton States and International Exposition, Ga..... 563
*Coupling, Almond..... 57
Cowenhoven Tunnel, Colo..... 157
*Coxe, Eckley Brinton..... 463
Coxe, Eckley B., Furnace. Pat..... 274
Coxe, Eckley B., Traveling Floor Furnace..... 323
Craig District, Colo..... 517
Craighill, Col. William P..... 447
Cramp & Sons, Ship & Engine Bldg. Co., Pa..... 540
Crane Iron Co., Pa..... 204
Crane Co., Ill..... 59, 567
Craney, Thos., Caustic Soda, App. Pat..... 226
Craney, Thos., Caustic Soda Mfg., Pat..... 226
Crawford Gold Mine, N. C.... 351, 422, 590
Crockard, F. Hearne..... 395
Crocker, Frederick, Penna..... 203
Crocker Wheeler Electric Co., N. J.. 347
Crecellus, Louis I., Process of Casting metals, Pat..... 370
Creede Mines, Colo..... 612
Creede Mining Camp, Colo..... 300
Creed Tunnels, Colo..... 109
Creighton Gold Mining Co., Ontario, Can..... 231
Cremer, J. H., and Bicknell, G. A., *Chemical and Metallurgical Handbook*..... 26
Cremer, F., Determination of Tungsten..... 345
Creole Silver Mg. Co., Utah..... 446
Creole Mine No. 2., Utah..... 398
Crescent Mg. Co., Colo..... 141
Crescent Mining Co., Utah..... 398
Crescent Sheet & Tin Plate Co., O... 419
Cresson Con. Mg. Co., Colo..... 564
Creston Mine, Colo..... 181
Cripple Creek, Colo..... 327
Cripple Creek Con. Mg. Co., Colo.... 595
Cripple Creek District Mines, Colo., 375, 441, 469
*Cripple Creek Gold Mines, Colo. 97, 163
Cripple Creek Mills, Colo..... 16, 132
Cripple Creek Mines..... 231, 314
Cripple Creek Mining Stocks in New York..... 116
*Cripple Creek Ore Deposits, Colo ... 151
Cripple Creek Ore Shipments, Colo., 16, 64, 157
*Cripple Creek Phonolite Dikes..... 583
Cripple Creek Sampler, Colo..... 181
Cripple Creek Steam Hoists..... 589
Croesus Gold Mg. Co., Colo..... 37
Croesus Mine, Transvaal..... 519
Crook Bros. Co., W. A., N. J..... 275
Cronise, Ernest S..... 515
Crosby, W. O., Classification of Geological Deposits..... 28
Crossley's Pat. Ferric Oxide Production..... 35
Crossley's Pat., Producing Oxides... 11
Crosse, A. T., Treatment of Pyritous Concentrates by Cyanide..... 559
Crowley vs. Nelson Lumber Co..... 589
Crow Peak Mg. Co., S. Dak..... 326
Crown Point Gold & Silver Mg Co., Cal..... 525
Crown Point Mg. Co., Cal..... 405
Crown Point Mine, Colo..... 181, 588
Crown Point Mg. Co., Nev., 14, 39, 62, 110, 134, 159, 183, 285, 302, 309, 327, 333, 350, 357, 374, 381, 397, 422, 429, 470, 493, 567, 590
Crown Point Mine, N. Mex..... 446
Crown Point & Virginia Mining Co., Colo..... 109
Crowther, Rossiter, Albright's Pat. Potassium Cyanide Making..... 610
Croydon Gold Field, W. Aus..... 520
Crucible Covers, Mfrs. of Pat..... 370
Crucible, Electro-Chemically Heated, Pat..... 442
Crucible, Plumbago, How to Use.... 134
Crucible Steel, Slater Pat..... 490
Crumback, Geo. M. N..... 540
Crusher and Grinder Pat..... 442
Crusher, Hannum's Pat..... 24
Crusher, Improved Dry..... 582
Crusher for Ore, Pat..... 466
Crushing Machine, Pat..... 202, 250
Crushing Mill, Pat..... 178
Crushing Ore, Pat..... 442
Crushing Ore by Electricity..... 440
Crushing Rolls, Altis' Reliance..... 561
Crystal Gold Mine, Ont..... 595
Crystal Gold Mg. Co., Ont..... 519
Crystal Gold and Silver Mg. Co., Utah..... 543
Cudner, Gustavus L., Ore Concentrating Apparatus, Pat..... 394
Cumberland Mine, Idaho..... 61
Cumberland Mg. Co., Utah..... 63
Cumberland Tin Plate Co., Md..... 59
Cummer & Son Co., F. D..... 587
Cummings Mg. District, Wyo..... 544
Cunningham, J. A..... 540
Cupel, Gold and Silver in..... 123
Cupels, Use of..... 219, 243
Cuplin's Pat. Placer Mining Separator..... 58
Cupola Furnace Improvement Pat. 466
Curran Mine, Colo..... 2-2
"Currencies of the World"..... 115
Currency Bill, Carlisle..... 42
Currency Bill Debates..... 18
Currency Commission..... 91
Currency Question..... 450
Currency Reform..... 1, 66, 90, 57, 115, 121
Currie Furnace Co., Pa..... 491
Custom House Guide..... 435
Cyanide Case, English Decision..... 531
Cyanide Gold Recovery, DeWilde's Pat..... 34
Cyanide Making, Readman's Pat..... 31
Cyanide Mill, Colo..... 516
Cyanide Patents, New Zealand..... 495
Cyanide Plant, Golden Bar, Coolgardie..... 486
Cyanide of Potash, Mfg. of, Pat..... 370
Cyanide of Potash in Gold Extraction..... 411, 436, 460
Cyanide of Potash, Reaction of..... 435
Cyanide of Potash, Selective action of..... 171
Cyanide Process... 218, 362, 388, 409
Cyanide Process, Copper Precipitation by, Pat..... 370
Cyanide Process, Direct Treatment by the..... 389
Cyanide Process, Extension..... 533
Cyanide, Process of Mfg. Pat..... 202
Cyanide Process, Variations on, Pat. 370
Cyanide Process, Victoria..... 582
*Cyanide, Rate of Solution of Gold in. 604
Cyanide Solutions, Action of Alkaline Sulphides..... 510
Cyanide, Treatment of Pyritous Concentrates..... 559
Cyaniding or Chlorination..... 461
Cyanogen Bromide, for Dissolving Gold..... 169, 291, 363
Cyanogen Bromide and Cyanide Bromide..... 483
Cyanogen, Estimation in Impure Solutions..... 584
Cylindrical Vessel for Spraying Water, Ross' Pat..... 610

D

Daddy Gold Mine, Idaho..... 229
Daggett, John..... 347
Daggett, Mr., Supt. of San Francisco Mint..... 251
Dahlonega Branch R. R., Ga..... 86
Dahlmann's Pat. Miner's Safety Lamp..... 154
Dakin, Charles S..... 232
Dalton Mg. Co., Utah..... 453, 477, 501
Daly Mg. Co., Utah, 39, 207, 398, 404, 446, 614
Damages for Breach of Contract..... 34
Damages for Delay in Performance of Building Contract, Legal Decision.. 178
*Dana, James Dwight..... 367
Dana's Pat. Ore Washer and Concentrator..... 586
Danby Salt Mine, Cal..... 60
Dangerous Machinery, Legal Decision..... 441
Dangerous Premises, Duty of Owner, Legal Decision..... 273
Daniels, John F., Amalgamator Pat.. 418
Dardespeine, G. Zinc Alloy, Pat..... 202
Darnel Iron Works..... 587
Darling Mine, Cal..... 325
Davenport Mine, New Mex..... 590
Davenport, Russell W..... 371
Davidson, M. T., N. Y..... 371
Davis, Percy..... 35
Davis Coal and Coke Co., W. Va., 135, 136, 375
Davis, F., Coal Supplies of Polk County, Ia..... 149
Davis' Pat. Manganese Sulphate Production..... 35
Daw's Pat. Valve for Rock Drills..... 11
Dawson, Geo. M., C. M. G., Canadian Geological Survey..... 203
Day, Edward H..... 35
Deadwood & Delaware Smelter, S. Dak..... 15, 230, 254, 279, 591
Deane Steam Pump Co., Mass..... 275
Dearborn Drug & Chemical Works, Ld..... 420
De Batz, Baron R., Paris..... 324
De Beers Con. Mines, S. Africa, Report..... 316
Debuol, N. G. S..... 59
Debris Commission of Cal..... 348, 372
Deby, Julien Marc..... 443
Decatur Land Co..... 587
Deceit in Sale of Mining Stock, Legal Decision..... 393
Decorah Mine, S. Dak..... 15
Deep Down Mine, N. M..... 62, 277, 590
Deep River Quarry, Conn..... 277
Deer Trail Mine, Wash..... 207
De Lamar Gold Mining Co., Nev.. 253, 350, 422
De Lamar Mg. Co., Idaho.. 61, 86, 93, 102, 134, 145, 182, 189, 195, 253, 277, 285, 349, 357, 381, 405, 441, 429, 453, 469, 477, 493, 501, 525, 549, 566, 573, 597, 613, 621
Delaware Iron Works, Del..... 35
Delaware & Hudson Canal Co.. 112, 213, 239, 519
Delaware, Lackawanna & Western R. R. Co..... 21, 45, 113, 141, 309, 423
Delaware, Susquehanna & Schuylkill R. R., Pa..... 135
Delle S. Mg. Co., Colo.... 157, 228, 421, 516
Delecroix Emil, *Coal Statistics in France and Belgium*..... 602
Delmonico Mine, Colo..... 132, 205
Del Monte Mining Co., Colo..... 325, 453
Del Rey Mg. Co., Nev..... 167, 191, 213, 257, 285, 309
Demoulin, M., *Steam Engine Construction*..... 531
Denison, Karl F., Colo..... 203
Denmark, American Petroleum..... 561
Denver Fire Clay Co., Colo..... 515
Denver Mill, Colo..... 132, 469
Denver Mg. Exchange Building Co., Colo..... 520
Denver Mint, Colo..... 132
Denverside Smelting and Refining Co..... 577
Denver Stock Quotations..... Weekly
Depew Improvement C. N. Y..... 568
De Quille, Dan, Gold Belts of Nevada, 532
Derbec Blue Gravel Mine, Cal..... 204
Derrick, the Largest in the World.... 202
Descubridora Mines, Chile..... 615
Desilverization of Lead by Zinc... 274, 364
Desmazures, I. M. A., Separation of Argentiferous Lead from Blende Pat..... 370
Desulphurization of Pig Iron..... 317
Detroit Copper Mg. Co., Ari.... 470, 564
Dewees Wood Co..... 587
Dewdrop Mine, Colo..... 325
De Wildes' Pat. Cyanide Gold Recovery..... 34
Diamond Coal Washery, Pa..... 302
Diamond Mine, The Monastery..... 298
Diamond, New Field in Mahasha, S. Africa..... 201
Diamondville Coal Mines, Wyo..... 255
Dickman, R. N..... 12
Dickson Peat Fuel..... 35
Dickson, W. K. L. & A., *Life and Inventions of T. A. Edison*..... 99
Dickerson, Edward N., Acetylene Gas Process, Pat..... 298
Dickerson's Pat. Producing Gas..... 610
Dictionary of the English Language, Standard..... 314
*Diehead, Gardner..... 535
Dierdorff, Henry R., Mining Machine, Pat..... 418
Dietrich Syndicate, Ind..... 373
Dietz, E., Mfrs. of Phosphatic Slag, Pat..... 370
Difficult Creek Mine, Colo..... 253, 421, 516
Dinkey, Charles E..... 59
Direct Mine, Nev..... 422
Discharge, Wrongful, of Apprentice.. 105
Dissolving Mining Co., Legal Decision 297
Dividends, Mining Companies..... 102, 285
Dividend on Mining Stock..... 465
*Dixon Hand Drill..... 153
Dixon, Joseph, Crucible Co., N. J.. 36, 59
Dixon, Wm. H., Pat..... 298
Dobell, John L., Carbon for Electrical Purposes, Pat..... 442
Dock, Gilliard..... 347
Dodd, Willis G., Ore Crusher, Pat.... 274
Dodge, James M., Process of Removing Piles of Coal, Pat..... 394
Dodge Creek Oil & Gas Co., N. Y.... 518
Dodge's Pat. Storage Structure..... 490
Doe Run Mine, Mo..... 544
Dolcoath Tin Mines, Cornwall..... 333
Dolly Varden Group, B. C..... 111
Dolly Varden Mine, Colo..... 132
Dominion Coal Mg. Co., N. S.... 447, 573
Don Enrique Mining Co, Meeting.... 405
Doolittle, Charles L..... 155
Dora Mg. Co., Cal..... 621
Doris Gold and Silver Mg. Co., Colo., 13, 153, 228
Dobson's Pat. Mining Machine..... 539
Double-Decker Mine, Colo..... 36
Douglas, W., Lake of the Woods District, Ont..... 152
Dover Boiler Works, N. J..... 83
Down, Stancliff B..... 395
Downs, Geo. W., Amalgamator, Pat.. 412
Dragoon Copper Mine, Ari..... 12
Drake Stratton Co., Minn..... 301, 350
Draver, Emil R., Conveyor, Pat..... 466
Dredging Apparatus, Pat..... 226
Dredging Machine, Kirg's Pat..... 586
Dressing Ores, Hancock's Pat..... 586
Drill, Beal's Pat..... 11
Drill Coal Pat..... 370
*Drill, Dixon Hand..... 153
Drills, Electric..... 486
Drills, Means of Operating, Pat..... 250
Drill, Mine, Pat..... 250
Drill, Rock, Pat..... 250, 298
Drills, Rock, Tripod for, Pat..... 226
Drill Screws, Marriott's Pat..... 154
Drill, Stone, Rachielles' Pat..... 34
Drill Valve, Daws' Pat..... 11
Drop Hammer, Pat..... 226
Drown, D. T. M..... 347, 385
*Dry Crushing by Stamp Mill..... 392
Dry Lake District, Cal..... 156
Dry Placer Mg. Machine, Simison's Pat..... 490
Dry Separator, Hewitt's Pat..... 562
Dubbs' Pat. Sulphur Removal..... 34
Dubois District, Pa..... 39
Dubuque Mine, Mont..... 182
Ducktown, Tenn., Copper Mines. 265, 271
Dugan Cu Stone Co., Texas..... 279
Duluth & Iron Range R. R., Minn., 37, 59, 61, 349, 421, 469, 517, 542, 566, 589
Duluth Mg. Co. Minn..... 540
Duluth Mine, Minn..... 493
Duluth, Missabe & Northern R. R., Minn..... 59, 158
Duluth Stock Quotations..... Weekly
Dump Car, Peteler's Pat..... 34
Dunbar Furnace Co., Pa..... 83, 251
Duncan Lixiviation Works, Colo.. 109, 277
Dundee & Jones' Pat. Pulverizing Machines..... 490
Dunderburg Mg. Co., Colo..... 564
Dunham, C. F..... 347
Dunkirk Steel and Iron Co., Ill..... 275
Dunkin Mine, Cal..... 542
Duquesne Gold Mg. Co., Colo..... 565
Duquesne Reduction Co., Pa..... 251
Durant Mine, Colo.... 157, 252, 396, 516
Durango Girl Mine, Colo..... 589
Durango Land and Coal Co., Meeting. 453
Durnford, F. D.G., Coal in Borneo.... 579
Dutch Mine, Cal..... 612
Dykes District, Ala..... 12
*Dynamo for Electrolytic Work..... 368

E

Eagle Bird Mine, Cal..... 541
Eagle County Mines, Colo..... 349
Eagle Mine, Utah..... 87
Eagle River Mine, Colo..... 444
Eagle Salt Works, Nev..... 405
*Eames & Cary, Colo..... 153
Easement for Flowage..... 465
East Pacific Mine, Mont..... 14
East Sierra Nev. Mg. Co..... 429, 494
Eastern Placers, Oregon..... 374
Eaton, Daniel G., N. Y..... 275
Eaton, Seymour, *Business Forms*.... 338
Eaton Stone Co., O..... 159
Eberle, F. X. Mine, N. Mex..... 590
Eberhard Mfg. Co..... 587
Echois Mine, Ala..... 83
Eck, August, Miners' Candlestick.... 323
Eclipse Mine, Cal..... 227, 516
Eclipse Mine, Colo..... 396
Economy Water Tube Boiler Co..... 587
Ecuador, Coinage..... 43
Eddy, J. W., Lewis & Clarke County, Mont..... 483
Eddy, J. W., Mining near Helena, Mont..... 26
Eddy's Pat. Artificial Stone..... 11
Eddy Valve Co., N. Y..... 395
Edgar Thomson Steel Works, Pa.. 204, 371
Edgar Thomson Foundry and Machine Works, Ala..... 376
Edison, T. A., Life..... 99
Edison Electric Light Co..... 587
Edsall & Co., Clarence..... 347
Education in Rhode Island..... 26
Edwards, Henry W., Kernel Roasting..... 411
Edwards, Thomas, Ore Roasting Furnace, Pat..... 370
Egleston, Thomas..... 515
Egypt, Nitrates..... 81
Eight Hour Day..... 176
Elba Mine, Mont..... 14
Elbe Iron Co., Minn..... 350
Elbers, A. D., Sulphur and Magnesia in Blast Furnace Slag.. 52, 75, 363
Elbers, A. D., Utilizing Glass Furnace Slag..... 2
El Callao Gold Mining Co., Venezuela..... 457
El Callao Mining Co., Venezuela. Report..... 462
Eldorado Mine, Colo..... 133
Electric Arc, emperature..... 58
Electric Canal Towage..... 322
Electric Current, Action of on Fused Sulphurets..... 223
Electric Drills..... 486

Electric Engineering Co., Cal..... 251
Electric Fireproofing Co., N. Y..... 36
Electric Haulage Plant, Berwind-White Collieries..... 508
*Electric Hauling and Signaling..... 33
Electric Heat Alarm Co., Mass..... 179
Electric Heating..... 561
Electric Lamps in coal mines..... 316
Electric Light Mine, Utah..... 614
Electric Metal Heating. Pat..... 370
Electric Metal Working apparatus. Pat..... 250
*Electric Mine Pump..... 297
Electric Mining Machine, Pat..... 323
Electric Ore Crusher..... 440
Electric Plant, Silvester, Colo..... 580
Electric Power & Irrigation Co.,Colo. 540
*Electric Power at Pachuca, Mex..... 417
Electric Power, Winding Engine..... 535
*Electric Pumping Plant..... 322, 590
Electric Tramway Development..... 80
Electric Transmission of Power in Italy..... 322
Electrical Congress, International..... 99
Electrical Engineers, American Institute..... 59
Electrical Engineering Co.,*Minn..... 179
Electrical Measurements, Units of.. 200
*Electrical Mine Hoist..... 201
*Electrical Plant, Swiss..... 128
Electrical Switchboard, Evolution.. 99
Electrical Work, Domestic..... 602
Electrically and Chemically Heated Crucible. Pat..... 442
Electricitats Gesellschaft, Process for Granulating Metals. Pat..... 370
Electricity Applied to Mining..... 271
Electricity, Alternating Currents.... 2
*Electricity in Coal Handling..... 488
Electricity, Direct Conversion of Heat into..... 154
Electricity, Elementary Course..... 555
Electricity in Hungarian Mines..... 514
Electricity in Mining in Austria..... 560
Electricity on the New York Canals.. 106
Electricity on Railroads..... 513
Electro-Chemical Gold Extraction Process..... 442
Electro-Chemie, Jahrbuch..... 555
Electro-Metallurgy..... 602
Electrolysis, Pat.....202, 346, 370
Electrolysis, Color Making by..... 54
Electrolysis, Copper Sulphate..... 323
Electrolysis, Limits of..... 465
Electrolysis, Refining by Pat..... 226
Electrolytic Alkali Process..... 514
Electrolytic Alkali Process, Hargraves-Bird..... 539
Electrolytic Copper Process, Pat.. 442
Electrolytic Determination of Metallic Poison..... 129
Electrolytic Process, Blackman's Patent..... 610
*Electrolytic Work, New Dynamo for 368
Eliza Mine, Colo.....252, 336, 612
Elizabeth Copper Mine, Colo..... 157
Elk City District, Idaho..... 511
Elkhorn Mine, Colo..... 589
Elkhorn Mg. Co., Mont...86, 134, 182, 278, 350, 397, 446, 453, 470, 549, 576, 566, 573, 597, 621
Elkton Mg. Co., Colo...40. 85, 132. 157, 205, 252, 285. 349, 357, 381, 405, 421 429, 445, 453, 477, 501, 520, 549, 573, 597
Ellen Vannin Mg. Co., Cal..... 396
Elliot Car Comp., Ala..... 467
Elliott's Pulverizing and Mixing Apparatus. Pat..... 514
Elliott-Washington Steel Co., Pa..... 155
Ellis & Sons, A Miners' Safety Lamp, 418
Ellis, Wm. S..... 395
Ellithorpe, F. T., N. J..... 348
Ellsworth's,Gas Manufacturing, Pat. 82
Elmira Iron & Steel Rolling Mill Co.. 587
Elmira Mining Co., Idaho..... 229,
Elmira Steel and Iron Co., N. Y..... 275
El Paso Mine, Colo..... 252
El Paso Reduction Works, Colo...132, 469
Ely Gold Mine, Minn..... 37
Elyton Land Co., Ala.....441, 511
Emma Company, Utah..... 447
Emma Mine, Colo..... 228
Embleton & Glossop's Pat. Gold Stamp Lifting..... 610
*Emig's System, Subterranean Water Supply..... 81
Emmerich, Rudolph F. Stone Grinding Machine. Pat..... 466
Emmett, Wm. LeRoy, *Alternating Current Wiring and Distribution.* 2
Empire Gulch Gold Mg. Co., Colo.... 85
Empire Mine, Cal..... 492
Empire Red Slate Co., N. Y..... 86
Empire State Electric Forging Company, N. Y..... 347
Employee, Assumption of Risk..... 33
Employee, Exercise of Care..... 538
Employee, Incompetence..... 561
Employee, Notice to..... 508
Employee, Risk from Fellow Servants' Negligence..... 129
Energy in Rain..... 52
Engelbach Machine Co., Colo..... 465
Engine, Blast Furnace, Gas for..... 99
Engine, Locomotive, Pat..... 274
*Engine, McGeorge Gas..... 10
Engine, Warranty of..... 109
Engineering Ass'n of the South...250, 299, 449
"Engineering and Mining Journal"..1, 43
Engineers and Their Triumphs..... 339
Engineering Education Society..... 507
"Engineering News"..... 51
Engineering Societies, Association of. 59
*English Mt. Mine, Cal., Tramway... 55
Ensign Car and Mfg. Co., W. Va...59, 179
Enterprise Coal Co., Pa..... 491
Enterprise Mg Co., Colo..... 109
Enticing a Servant Away..... 178
Entwickelungsgesetz der Erde..... 555
Equitable Mg. Co., S. Dak.....23, 47
Erie Mine, Cal..... 40
Esmeralda Mine, S. Dak..... 159
Essex Coal Mg. Co., Pa..... 113
Estella Mine, Mont..... 61
Eugene Mg. Co., Ariz..... 180
Eureka Con. Mg. Co., Nev.....212, 213, 237, 285, 309, 333
Eureka District, Cal..... 40
Eureka & Excelsior Mine, Ore.135, 230, 513
Eureka Gold Mg. Co., Colo....60, 133, 213
Eureka Granite Quarry Co., Vt..... 279
Eureka Hill Mine, Utah.....446, 494
Eureka Mill, Utah..... 279
Eureka Mg. Co., Cal.....71, 95, 429
Eureka Tellurium Mine, Cal. 492, 621
Europe, American Securities in..... 450
Europe, Banks, Specie Holdings..Weekly
Europe, Mineral Statistics..... 51
Eurydice Mine, Colo..... 568
Eutopia Quicksilver Mine, Cal..... 294
Eva May Mine, Mont..... 110
Evans A., Jr..... 467
Evans Mine, Ont..... 399
Evening Star Mg. Co., Colo..... 37
Everett, Frank..... 563
Everett Smelter, Wash..... 111
Everglade Extension Mine, Colo...85, 180
Evidence, Parol..... 538
*Examination of Ore Bodies..... 221
Excavator and Conveyor, Bates' Pat. 514
Excavating Machine, Warren's Pat.. 610
Excavations, Method of Making, Mason's Pat..... 82
Excavators Used on Manchester Ship Canal..... 104
Excelsior Mine, Colo..... 300
Exchange Market, New York..... 162
Exploration and Development Co., W. Australia..... 69
Explosives in Belgian Collieries..... 364
Export Trade, U. S.....553, 578
Exposition Association of Colorado... 321
Exposition, Mexico..... 154
Extracting Fine Gold and Sulphurets, Robson & Crowden's Pat..... 490
Extracting Nickel, Manhes Pat..... 490
Ezekiel, D..... 299

F

Failures, U. S..... 354
Fair, James G..... 12
Fairbanks, Harold W. Auriferous Conglomerate in California..... 389
Fairbanks, H. W., *Geology of the California Coast Ranges*..... 123
Fairstake & Sunset Mines, Ari..... 156
Falding's Pat. Furnace for Burning Ores..... 514
Falding's Pat. Muffle Furnace..... 514
Famous Concentrator, Colo..... 36
Famous Mine, Cal.....542, 589
Famous Mg. Co., Colo..... 133
Fan, Blades for Ventilating. Pat..... 250
Fans for Mines..... 370
Fans for Ventilating Mines. Pat..... 250
Fannie Rawlings Mine, Colo..... 445
Faroe Islands, Coal..... 130
Farrell Foundry and Machine Works, Conn..... 131
Farmington. Mining Dist., Utah..... 279
Faulkner Quarry, N. Y..... 159
Faure, President..... 189
Favorite Mine, Colo..... 252
Fay, John D..... 563
Fayol Iron Co., Minn., 205, 301, 397, 542, 566
Fearn, Percy L.....299, 491
Featon's Pat. System of Pipes and Hot Air Jets..... 490
Federal Loan Mg. Co., Cal.....84, 564, 621
Feed Water Heater Mfg Ass'n..... 275
Fellow Servants' Negligence.....105, 129
Ferranti's Pat., Making Letharge.... 370
Ferric Oxide Production, Crossley s. Pat..... 35
Ferris & Bonita Claims, Colo..... 133
Ferro-Sodium..... 106
Ferrona Blast Furnace, N. S..... 179
Fertilizer Analysis..... 295
Fertilizers, Calculation of Values.... 270
Fertilizing Chemicals.....Weekly
Field, C. J., Electric Tramway Development..... 80
Financial Notes.....Weekly
Findlay Rolling Company, O..... 317
Findley Mine, Ga.....13, 109, 157, 397
Finished Steel Co., Ohio..... 515
Firebrick, French Substitute for..... 394
Fire Clays, Fusibility of..... 295
Firedamp and Atmospheric Depression..... 487
Fire Losses, U. S..... 43
First National Mine, Colo.....85, 372, 421
Fisher, Geo. H..... 467
Fisher Gulch Mine, Cal..... 349
Fisher Maiden Mine Br. Col..... 417
Fisk Mill, Utah..... 279
Fitch, Henry..... 371
Fitzgerald Mill, N. Mex..... 590
Flading's Pat. Making Concentrated Sulphuric Acid..... 586
Flagstaff Mine, Nev.....110, 158
Flat Top Coal Region, W. Va..... 423
Fletcher, E. L. *Practical Instruction in Quantitative Analysis*..... 387
Flint & Co., N. Y..... 179
Floersheim's Mine, Strike at Pa..... 398
Florence & Cripple Creek R. R., Colo. 180
Florence Cyanide Works, Colo.....132, 252
Florence Iron and Steel Co.....467, 515
Florence Oil & Refg. Co., Colo..... 420
Florence Quarry, Mass..... 86
Florence & Southern R. R., Colo..... 61
Florida Phosphate Co., France..... 469
Florida Phosphates for Honolulu.... 109
Florida Phosphate Mines..... 25
Florida Phosphate Shipments..... 85
"Flouring" and "Sickening" of Mercury..... 460
Flue-Dust Condensers; Freiberg Smelting Works..... 312
Flying Machine, Prize for..... 226
Fond du Lac Iron Company, Wis..... 515
Foos Gas Engine Co., Ohio..... 515
Ford & Donnelly, Ind..... 12
Ford, Silas Watson..... 611
Forepaugh Mg. Co., Colo., 45, 54, 102, 195, 285, 357, 381, 405, 429, 453, 477, 525, 549, 573, 597, 621
Forest City Stone Co., Ohio..... 279
Forest Home Mg. Co., Mo..... 14
Forest Oil Co, Pa.....230, 614
Forest Queen Mine, Colo..... 396, 445
Forfeiture of Oil Lease, Legal Decision..... 440
Forge, Pat..... 202
Fortunatus Gold Mg. Co., Wyo..... 184
Fossils Containing Petroleum and Anthracite..... 295
Four Hills Mine, Cal..... 420
Four Mile District, Wyo..... 254, 351, 471
Fox Coal and Coke Co., Tenn..... 614
France, Aluminum for Navy..... 97, 117
France, American Railroad Stocks... 141
France, Bank of.....189, 369
France and Belgian Coal Statistics... 602
France, Bimetallic League..... 306
France, Budget..... 237
France, Coal and Iron..... 285
France, Coal Production..... 207
France, Copper Imports..... 213
France, Credit and Prices..... 21
France, Foreign Commerce.....259, 429
France, Foreign Trade.. 117, 213, 309, 501, 549
France, Gold and Silver Movement 21 117, 141
France, Imports and Exports of Iron in 1894..... 200
France, Iron Industry..... 367
France, Lead Imports..... 213
France, Mineral Statistics..... 51
France, Ministry..... 45
France, Mint Coinage.....165, 621
France, New President..... 117
France, Taxation..... 237
France, Political Crisis..... 67
France, Prizes Offered by the Societe Technique..... 10
France, Public Revenue..... 429
France, Purchase of DeLamar Stock. 145
France, Savings Banks..... 189
France, South African Syndicate..... 213
France-Spain Commercial Treaty...45, 93
France, Specie Imports and Exports.. 381
France, Steel Rails..... 285
France, Steel Works..... 117
France, Strikes..... 237
France, Sugar Duties..... 237
François, A., Safety Lock for Mining Lamps, Pat..... 418
Frank Kneeland Machine Co., Ill..... 347
Franklin & Beckwith Mine, Cal..... 372
Franklin Iron Co., Minn., 110, 158, 350, 470, 493, 542
Franklin, Jr., Mg. Co., Mich., 158, 182, 446
Franklin Mine, Colo..... 396
Franklin Mine, Ga..... 565
Franklin Mg. Co., Mich., 16, 109, 134, 229, 326, 333, 373, 416, 469, 542
Franklin Mining Co., Mich, Report, 340
Franklinite & Zinc Ore Litigation.... 601
Franks, J. B..... 587
Fraser & Chalmers, Ill..... 36
Fraud on Owner of Mining Land by Agent, Legal Decision..... 440
Frazer, P., U. S. Geological Survey.. 3
Free Coinage Mine, Colo.....85, 181
Free Coinage Mine, Mont.....155, 229
Free Coinage of Silver..... 409
Free Gold Mg. Co., Nev..... 182
Freeland, F. T., Extralateral Rights. 123
*Freeland, Francis T., New Apex and Tunnel Decisions..... 365
Freeland Mine, Colo..... 588
Free Silver Mine, Colo..... 157, 228, 421
Freight on Birmingham Pig-iron..... 195
Freight Rates on Coal..... 300
Freight Rates, Pittsburg..... 113
French Guiana Gold Shipments..... 471
French, Samuel L., Forge. Pat..... 202
Frick, H. C., Coke Co., Penna..... 279
*Friedeberg Apparatus, Coal Dust Burning..... 127
Friedeburg, Alfred, Coal Dust Feeder for Furnaces. Pat..... 370
Friedheim, Carl, *Studium der Qualitativen Chemischen Analyse*..... 290
Frisco Mine, Idaho.....37, 193, 615
Fritz, George W., Mining Machine. Pat..... 346
Fritz, John..... 193. 371, 540
Froges, Societe Electro-Metallurgique..... 97, 117
Frontino & Bolivia Gold Mg. Co., Colombia..... 16
Frue Vanning Machine Co., Cal., 131, 515
Frue Vanning Mach. Co., Pneumatic Jig. Pat..... 466
Fry's Pat. Tunneling Machine..... 562
Fuel, Artificial, Mfg. of. Pat..... 442
Fuel, Artificial. Pat..... 418
Fuel Gas Retort, Martin's Pat..... 562
Fuel, Mfg of Artificial. Pat..... 226
Fuel, Process of Burning. Pat..... 274
Fulford District Mine, Colo..... 444
Fuller's Earth Exports, Fla..... 373
Fuller, Hamilton, *Custom House Guide and Steamer List*..... 435
Fumes, Condensation of, in Blast Furnace..... 298
Funk & Wagnall's Co., Standard Dictionary..... 314
Furbinger's Pat. Muffle Furnace..... 34
Furnace, Pat.....178, 250 274, 323
Furnace Air Cut-off, Rhodes' & Kloz' Pat..... 82
Furnace, Brass Crucible. Pat..... 202
Furnace Developments, Birmingham, Ala..... 558
Furnace Feeder for Chain Grates. Pat..... 418
Furnace, Brown Horsehoe.....36, 106
Furnace for Burning Ores, Falding's. Pat..... 514
Furnace, Metallurgical, McGranahan's. Pat..... 82
Furnace, Ore Roasting. Pat..... 370
Furnace, Oxidizing. Pat..... 226
Furnace, Pit. Pat..... 250
Furnace, Roasting, Ropp's. Pat..... 34
Furnace with Traveling Floor. Pat.. 323
Futterer, Dr. Karl, *Africa in its Relation to Gold Production*..... 123

G

Gadsden Furnaces, Ala..... 467
*Gaetzschmann, Moritz Ferdinand... 415
Galena, Kansas, Mines..... 301
Galena Gold Mine, Colo..... 228
Gale's Pat. Hydrocarbon Burner..... 586
Galesteo Creek Placers, N. M..... 135
Galey & Lord Co..... 587
Gallinowsky, Hugo, Artificial Stone, Pat..... 250
Garbutt Mine, Colo..... 567
Garden City Land Co., N. Y..... 156
Garden City Sand Co., Chicago..... 299
Garden Mine, Ga..... 109
*Gardner Die-head..... 538
*Gardner Grinder..... 129
Garnet Mine, Ga..... 86
Gartside, Amos..... 443
Garthwaite, E. H..... 611
Gas, Apparatus for Mfg. of.....298, 466
Gas, Blast Furnace, in Engines..... 99
Gas Burner, Pat..... 202
Gas Engine, Blast Furnace, Gas for 49, 52
Gas Engine in Marine Service..... 323
*Gas Engine, McGeorge..... 10
Gas Engine, Robinson's Pat..... 58
Gas Generator, Pat..... 226
*Gases, Liquefaction of..... 318
Gas, Manufacture of, Pat..... 298
Gas Manufacture, Ellsworth's Pat.... 82
Gas Producer, Shinner's Pat..... 562
Gas Producing, Dickerson's Pat..... 610
Gas Producing, Jerzmanowski's Pat.. 610
Gas Retort, Hennessey's Pat..... 11
Gas, Water, Mfg. of, Pat.....202, 466
Gases from Coke Ovens, Utilizing.... 392
Gases, Occluded, in Coal Dust..... 58
Gases, Waste, Use of in Puddling Process, Pat..... 370
Gates Iron Works, Ill..... 348
Gates, John W..... 299
Gates' Type Rock Crusher, Lowry's Pat..... 610
Gautier, E. T., Copper Furnace, Pat.. 466
Gaynor Glass Works, N. J..... 107
Gem Mine, Idaho.....37, 193, 205
Gemini Mine, Utah..... 614
General Electric Co.....155, 462, 467
General Hocking Coal Co, Ohio..... 254
Gen. Thomas Mine, Colo..... 516
Gen. Wilmington Coal Co., Ill..... 448
Geneva Mine, Colo.....495, 589
Gennesee-Vanderbilt Mine, Cal..... 492
Geodetic Surveys of Russia..... 298
Geological Atlas of the U. S..... 387
Geological Deposits, Classification.... 28
Geological Formation, Goodwin Sands 80
Geological Institution of the Univ. of Upsala, Sweden..... 218
Geological Survey of Iowa, 2d Annual Rept..... 363
Geological Map of Alabama..... 98
Geological Society of America, Bulletins..... 123
Geological Survey of Canada.....98, 203
Geological Survey, South Dakota..... 555
Geological Survey, Minnesota..... 147
Geological Survey Report, New Jersey.....147, 243
Geological Survey, U. S ...1, 3, 25, 27, 74
Geology of California Coast Ranges. 123
George Simmon's Placer Mine, Cal.. 252
George's Creek Coal & Iron Co., Md. 253
Georgia, Banxite..... 585
Georgia Central RR..... 161
Georgia, Corundum Deposits..... 558
*Georgia, Early Blast Furnaces..... 585
Georgia, Manganese..... 585
Georgia Mg., Mfg. and Investment Co.....87, 227
German Mine, Colo..... 133
German Opinion of American Colleges..... 79
Germania Coal Mine, Pa..... 111
Germania Mine, Pa..... 398
Germany, Bimetallism..... 163
Germany, Coinage..... 115
Germany, Foreign Trade.....77, 163
Germany, Imports and Exports of Fuel..... 391
Germany, Iron 82, 128
Germany, Iron Imports and Exports. 605
Germany, Iron Production..... 394
Germany—Japan, Treaty..... 211
Germany, Loan Conversions..... 139
Germany, Production of Pig Iron. ... 464
Germany, Waterways..... 130
Gerstenhofer Process..... 219
Gesner Process for Preserving Iron.. 514
Geyser Mine, Colo.....60, 108
Geyser Mine, Utah.....87, 327
Gibbons, Ablam..... 515
Gibb's Pat. Nickeliferous Parytes ... 490
Gibraltar Con. Mg. Co., Cal..... 621
Gibraltar Wire Rope Tramway..... 130
Gibson, A. M., Schaefer-Heinemann Accumulator..... 148
Giles' Pat. Coal Washer..... 610
Girard Water Wheel Co..... 587
Githens' Pat. Machine for Drilling Rock..... 514
Gjers, J., Melting Furnace, Pat..... 178
Gladiator Mine, Ariz..... 108
Glasgow, Arthur G., Water Gas., Pat..... 202
Glasman's Pat. Concentratotor., ... 610
Glass Brick..... 610
Glencoe Con. Mg. Co., Cal., 405, 429, 453, 501, 525, 549, 573
Glendon Iron Co..... 587
Globe Mine, So. Dak..... 591
Gobbe, Emile, Mfg. of Water Gas, Pat..... 466
Gobbie Mine, Mo.....14, 110
Godfrey, James W..... 35
Godfrey Mine, Cal..... 109

Goerlich & Wichmann's Pat. Making Alkaline Cyanides 610
Goffre Mine, Idaho 37
Golconda Mine, Colo 396
Gold Amalgamator, Pat 226
Gold Apparatus for Collecting, Pat 394
Gold, Australia 199, 554
Gold Balance, Treasury 474
Gold Bar Con. Mg. Co., Cal., 549, 573, 579, 621
Gold Bearing Claims, Tacoma, Wash. 194
Gold Belt Leasing & Mg. Co., Colo., 372, 589
Gold Belt Exploring Co., Colo 157
Gold Belt, Leadville, Colo 77
Gold Belts of Nevada 532
Gold Blossom Mine, Cal 13, 252
Gold, British Guiana 16, 40, 75
Gold, Brazil, Highlands of 55
Gold, California Placer 101
Gold, Carter Mine, Cal 420
Gold Claims of Tacoma, Wash 194
Gold Coin Group Mines, Utah 471
Gold Coin Mining Group, Utah 363
Gold Coins, Russia 595
Gold, Conglomerates, Cal 389
Gold Cross Company, Cal 420
Gold in Coal 267
Gold, Crystalline. Liquation in 610
Gold Deliveries, Syndicate 618
Gold Deposits, Cripple Creek, Colo 151
Gold, Deposits of New Zealand 292
Gold Diggings of Goler 223
Gold, Dissolving, Cyanogen Bromide. 169
Gold, Dissolving by Cyanogen Bromide and Cyanide of Potash 267
Gold, Dissolving with Cyanogen Bromide and Potassium Cyanide. 291
Gold District, Lake of the Woods, Ont 152
Gold Exports 19, 43, 66, 91, 97, 115, 138
Gold Exports and Imports ..... Weekly
Gold Extraction, Bromo-Cyanide Process 510, 602
Gold, Extraction from Ores, Pat 418
Gold Extraction Process, Electro-Chemical 442
Gold Extraction, Haycraft Process 490
Gold Fields, Western Australia 51
Gold Fields of the Yukon 387
Gold & Globe Mg. Co., Colo 102, 109, 132, 195, 205, 276, 285, 357, 381, 405, 429, 453, 469, 477, 501, 525, 549, 573, 597, 621
Gold Hill Channel Mg. Co., Ore 422
Gold Hill Mine, Colo 421, 445, 517, 589, 590
Gold Hill Stamp Mill, Idaho 229
Gold Hoards 530
Gold Imports, U. S 187
Gold, India 75, 111
Gold King Mine, Cal 181, 271, 420, 421, 516
Gold King Mg. Co., Colo 109, 495, 589
Gold, Lake of the Woods Dist 195
Gold Loan, Austria 43
Gold Loan, China 139
Gold Loan, U. S 97, 115
Gold Memorial, London 354
Gold, Mexican Taxes on 486
Gold Mines in Arizona 276
Gold Mines, California 420
Gold Mines of Cal., Wall Rocks of 172
Gold Mines of Colo 242
Gold Mines, Cripple Creek, Colo 97, 103
Gold Mine Group, Utah 39
Gold Mining Device, Mendenhall's Pat 586
Gold Mt. Mines, Cal 60
Gold Movement for Four Years 146
Gold Movement, France 21, 117, 141
Gold Movement, Great Britain 91, 187
Gold Movement, San Francisco 66
Gold Note Mine, Nev 543
Gold Ore, Amalgamation Pat 250
Gold Ores, Br mine Treatment 608
Gold Ores, Dahlonega, Tests 2
Gold Output, Colar Field, Br. India 399
Gold Output, Queensland 495
Gold Payments, Russia 427
Gold Payments, Syndicate 546
Gold in Perak 297
Gold Point Cons. Mg., Cal 549, 573, 597
Gold Point Mg. Co., Nev 357
Gold Point Con. Mg. Co., Nev 405, 429
Gold Premium 186
Gold Production, Africa 123
Gold Production, Increase 93, 189
Gold Production, U. S 74
Gold Properties in North Carolina 434
Gold Receipts, Treasury 594
Gold Obtaining, Pelatan & Elerici's Pat 490
Gold, Rate of Solution in Cyanide 604
Gold Receipts, Treasury 210
Gold Receipts, New South Wales Mint 211
Gold Recovery by Cyanide, De Wilde's Pat 34
Gold Recovery from Pyritous Concentrates by Cyanide 559
Gold Recovery, Sulman's Pat 35
Gold Recovery from Solutions, Pat 442
Gold Reduction, Cyanide Process 533
Gold Region, Rainy Lake, Minn 147, 253
Gold Reserve, Treasury 258, 426, 450
Gold Ridge Mg. Co., Cal 420, 564
Gold Ring Mg. Co., Colo 85, 564
Gold Ring Mine, Idaho 565
Gold, Saving of, Pat 370
Gold Separator, Pat 370
Gold Separator and Amalgamator, Schuman's Pat 514
Gold, Separation from Matte, etc. Pat 466
Gold Shipments from Br. Guiana 447
Gold Shipments from Fr. Guiana 471
Gold Shipments, London to New York 307
Gold Slimes, Treatment 106
Gold Reserves, Europe 355
Gold Sep. & Amalgamating Machine. 226
Gold Separator, Canfield's Pat 539
Gold and Silver Crown Mg. Co., Nev. 309
Gold and Silver in the Cupel 123
Gold and Silver Extracting from Ores, Mienesch's Pat 610
Gold and Silver Extraction Co. of America 63
Gold and Silver Production of the World 577, 602
Gold and Silver Extraction Co., S. Dak 184
Gold and Silver Extraction Co., Utah. 327
Gold and Silver Extraction Process, Pat 202
Gold and Silver, U. S 553
Gold, South Africa 75, 98, 226
Gold Stamp Mills, Harris' Pat 610
Gold Stamp Lifting, Embleton & Glossop Pat 610
Gold Standard, Japan 67
Gold Substitute for 226
Gold Sulphide, Properties 555
Gold, Tasmania 75
Gold Transactions, Russia 379
Gold, Transvaal 63, 75, 98, 194, 213, 226, 399, 483, 597, 615
Gold, U. S 482
Gold Valley Mine, Cal 319
Gold Valley Placer Mg. Co., Colo 181
Gold, Western Australia 75
Gold Withdrawals, Treasury 186
Golden Bar Cyanide Plant 486
Golden Chariot Mine, Cal 180
Golden Chest Mine, Idaho 229
Golden City Dist. Min. Co., Cal 227
Golden Cross Mg. Co., Cal 84, 468
Golden Crown Mine, Mont 518
Golden Eagle Group, Ariz 156, 324
Golden Eagle Mg. Co., Colo 133
Golden Feather Channel Co., Cal 93, 612
Golden Fleece Mine, Cal 492
Golden Fleece Mg. Co., Colo 102, 141, 195, 285, 357, 372, 381, 398, 405, 421, 429, 447, 453, 477, 501, 525, 549, 573, 597, 621
Golden Gate Mg. Co., Utah 183, 471, 614
Golden Jack Mg. Co., N. M 39
Golden Opportunity Mine, Colo 18
Golden Reward Mg. Co., S. Dak. 15, 230, 279
Golden Rule Slate Quarry, Pa 15
Golden State & Miners' Iron Works Cal 179
Golden Sunlight Mine, Mont 350
Golden Treasure Mine, Colo 133
Golden Wonder Mine, Ariz 611
Goldfield, Colar, India 289
Goler Gold Diggings 223
Goleta Mining Co., Cal 405, 477
Gooch & Waldo's Pat. Electrolytic Aluminum Reduction 34
Good Hope Mine, Cal 180, 357, 405, 492
Good Hope Mine, N. M 135
Good's Pat. Air Compressor 58
Goodwin Sands, Geological Formation 89
Goose Creek Gold Belt, Colo 181
Gordon Chemical Co., Ga 544
Gordon, Henry A., Gold Deposits of New Zealand 292
Gordon Mine, Ore 574
Gottschalk Mg. & Milling Co., Cal., 516, 541, 564
Gould & Curry Mining Co , Nev., 14, 38, 62, 95, 110, 119, 143, 167, 191, 213, 237, 543
Gould's Electric Mine Pump 297
Goulds Mfg. Co., N. Y., 204, 227, 299, 414, 564
Goulds Triplex Power Pumps 440
Government Securities, Prices in Europe 211
Gracie Con. Mg. Co., Cal 13
Gracey-Woodward Iron Furnace 611
Gradient-Telemeter Level 176
Grady Iron Mines, Ga 492
Granbo Mine, Mont 543
Grand Central Cyanide Ass'n, Ariz 411
Grand Encammment District, Wyo 544
Grand River Placers, Colo 444
Grank Trunk Coal Contracts, 64, 88, 145, 161
Grand Tunnel, Pa 614
Grand View Mine, Cal 542
Grand View Mine, Colo 349, 445
Grand View Mine, Wash 591
Grand Victory Mine, Cal 204
Granite Companies of N. H 229
Granite District, Wash 494
Granite Hill Mg. Co., Cal 429, 453, 477, 501
Granmam Mine, N. C 494
Grant, Arthur L., Refining Process of Nickel, Pat 418
Granulating Metals, Process for, Pat. 370
Graphite in Iron 129
Graphite Sprouting in Electrical Furnace 202
Grass Valley Miners' Union, Cal 87
Gravel, Auriferous, Discovery of, Utah 398
Gray & Tarbits' Pat. Mining Machine 106
Grease Cup 369
Great Britain, Alkali Exports 308
Great Britain, Foreign Trade 91, 187, 283, 387, 499, 619
Great Britain, Gold and Silver Movement 91
Great Britain, Imports of Metals 620
Great Britain, Iron and Steel Market 50
Great Britain, Mineral Production in 1894 323
Great Britain, Mining Companies 97
Great Britain, Mint Coinage 67, 619
Great Britain, Pig Iron Production in 1894 410
Great Hopes Mine, Colo 36, 255, 325, 372
Great Western Gold Mg. Co 309
Great Western Mine, Colo 349
Greece, Coal 489
Greece, Hematite Mining 511
Greece, Limogardi Copper Deposits 11
Green, George, Wales 324
Green Mt. Mine, Mont 566
Green Onyx Co., Utah 567
Green River Placer, Wyo 567
Greenhorn Mine, re 183
Greening, N., Stamp Mill Screen Clearer, Pat 250
Gregory, H. P. & Co., Cal 107
Grey Eagle Mg. Co., Cal 23, 36, 285, 309, 333, 357, 381, 492, 597, 621
Griffiths, Daniel D., App. for Mfg. of Oil and Water Gas, Pat 346
Grinder, Gardner 129
Grinding and Crushing Machine, Pat. 202
Grinding Machine, Pat 466
Grizzly Bear Mine, Colo 445
Grizzly Mg. Co., Utah 23, 47
Grizzly Ridge Mg. Co., Cal., 333, 357, 381, 405
Ground Hog Mine, Colo 420
Gross, Geo. M., Stamp Mill, Pat 466
Grundy, James, Coal Mines of India 219
Grundlazen der Kokschemie 460
Guadalcazar, Mex., Quicksilver Mining 607
Gudeman, Albert, Brick or Tile Kiln, Pat 202
Guillaume's Pat., Extracting Metals. 11
Gunckel, Winfield, O., Pat 226
Guad Gold Mg. Co., Idaho 133
Gun Explosion, Woosung, China 514
Gunflint Lake District, Minn 86
Gunnell Mine, Colo 252
Gunnison Gold Belt, Colo 300
Gunnison Mine, Colo 181
Guston Mine, Colo 492, 565
Guyser, Frank C., Air Compressor, Pat 226
Gwelo District, S. Africa 519
Gwin Mines, Cal 13, 325

H

Hain's Fork Coal Field, Wyo 111
Hains, Peter C 491
Hale Mine, Minn 517
Hale & Norcross Mg. Co., Nev. 14, 23, 39, 47, 62, 71, 86, 95, 110, 159, 183, 2 3, 278, 302, 350, 374, 397, 470, 517, 567, 589, 597, 613, 621
Hall, Edgar, Brick Bottom Furnace. 363
Hallwell Copper Co., Mich 277
Hall Mines, B. C 255
Hall Joseph, Aluminum Manufacture 581
Hall, James, N. Y 299
Hall, Robert Lee 203
Hall Robert F., Air Pump, Pat 250
Hall, C. W., and Gardeson, F. S., *Magnesian Series of the Northwestern States* 123
Hall's Pat. Pump 11
Hallstead & Duncan Mine, Cal 13
Hamburg Mine, Fla 373
Hamby Group, Ga 493, 612
Hamilton Iron and Steel Co., Ont 35
Hamilton & Ludington Mines, Mich 421
Hamilton's Pat, Drying White Lead 31
Hammond & Gordon's Pat. Improvement Hanning Concentrator 585
Hammond, Walter J., Concentrating Ores. Pat 202
Hancock Mine, Cal 372
Hancock's Pat. Dressing Ores 586
Handling Brooms, James' Pat 490
Hand Mine, Ga 13
Handy's Pat. Hydrocarbon Burner 82
Hannum's Pat. Crusher 34
Hanover Mine, Cal 564
Hannah Coal Mines, Wyo 184, 591
Hansen, Chas. C., Compressed Air in Mining 220
Hanyang Iron Works, China 106
Happy Thought Mine, Colo 61, 109, 325
Hardscrabble Mine, Nev 422
Hardscogg, Martin, Coal Drill. Pat. 370
Hard Times Mg. Co., Utah 327
Hardy, Frederick, Mining Tool. Pat. 202
Hargreaves-Bird Electrolytic Alkali Process 539
Harlan Mine, Ariz 541
Harland Mg. Co., Idaho 133
Harmony Mine, Cal 276
Harney Hydraulic Mg. Co., S. Dak. 285, 333, 357, 381, 405, 429, 453, 477, 501, 525
Harney Peak Tin Mg. Co., S. Dak 398
Harper's Pat. Placer Mining 490
Harquahala Gold Mg. Co., Ari. 12, 84, 132, 180, 227, 276, 324, 395, 429, 468, 501, 612
Harrisburg Foundry and Machine Works, Pa 563, 587
Harris, Geo. W., Apparatus for the Manufacture of Gas. Pat 298
Harris Gold Mine, Nev 477
Harris' Pat. Gold Stamp Mills 610
Harris' Pat. Electro-deposition of Aluminum 153
Harrison Safety Boiler Works 611
Harrison's Pat. Miners' Lamps 490
Harrison Safety Boiler Works, Pa 324
Harrison's Pat. Mining Machine 82
Hastings, J. S., Atlanta Lode, Idaho 128
Hastings, John B., Sub-classification of Xenogenous Ore Deposits 268
Hawkeye Mine, Mont 110
Haycroft Process, Gold Extraction 490
Hayes, Charles Willard, White Phosphates of Tennessee 294
Hazard Claim, Cal 13
Hazen, Allen 203
Hazel Colliery, Pa 110, 254
Hartsfeld Humbug Again 577
Hartford Gas Light Co., Conn 518
Hartley Coal Mine, Pa 111
Hartley Con. Mg. Co., Cal 23, 47, 71, 95, 119
Hartville Iron Mines, Wyo 423
Hartzell Mine, Colo 469
Harvey, Geo. H., Mfg. of Gas, Pat 298
Harvey Hill Copper Mine, Que 112
Harveyized Armor Plates 194
Harveyized Steel Castings 444
Hayes, John P., Oils, Fire Test, Vaporizing Apparatus, Pat 394
Head Center Con. Mg. Co., Cal 69
Headquarters of the Mg. Industry 601
Healdsburg Point Mine, Cal 372
Healey Mine, Mont 110
Hearst Gold and Silver Mg. Co., Cal. 621
Heather Fire Brick Co., Eng 540
Heat, Conversion into Electricity 154
Heath, G. L., Copper Assaying at Lake Superior 369
Heat, Mechanical Equivalent 58
Hecla Mine, Cal 132
Hecla Con. Mg. Co., Mont., 102, 195, 285, 357, 381, 405, 429, 453, 477, 501, 517, 525, 549, 573, 597, 621
Hecla Con. Mg. Co., Report 296
Hecla Iron Furnace, Pa 227
Hecla Iron & Mining Co., O 179
Hector Gold Mg. Co., Cal 588
Hedwig Mine, Ga 14
Hegeman Quarry, N. Y 279
Helena & Frisco Mine, Idaho 373
Helena Mine, Colo 252
Helena, Mont., Mining 26
Helium, Discovery of 346
Helmbacher Forge and Rolling Mills, Mo 275
Hemlock Stone Quarry, O 86, 279
Hemphill, James, Ingot Pusher, Pat. 316
Hendrie & Bolthoff Mfg. Co., Colo 252
Hendie, Joshua, Machine Works, Cal. 107
Henige Smelter, Mont 566
Hennessy's Pat. Gas Retort 11
Henrietta Mine, Ari 108
Hinrichs, W. Crushing Mill. Pat 178
Hinrich, Carl 40
Hinrich, Carl, Water Cooling Apparatus 293
Heinriques, David 587
Hering, C. A., *Entwickelunggesetz der Erde* 555
Herkimer Mine, Utah 303
Herth's Pat. Mine Trap-Door 586
Hess Well, Pa 395
Hetherington, A. E. Alloy, Pat 202
Hetherington, A. E., Cyanides, Process of Mfg. Pat 202
Hewitt, Abram S 193
Hewitt, Alfred M., Pipe Mfg. Pat 394
Hewitt, Goldsmith W 515
Hewitts' Pat. Dry Separator 562
Hibbing & Trimble Iron Mines, Minn. 110
Hibernia Mine, Mont 566
Hibernia Mine, Cal 612
Hibernia Mine, Colo 300
Hickory Swamp Colliery, Pa 302
Hidden Treasure Mine, Mont 110
Hidden Treasure Mine, Colo 109
Highland Colliery, Pa 159
High Island Granite Co., Idaho 229
High Temperatures, Determining 561
Hill, C. M., Coal Property, W. Va 207
Hill, Charles S 35
Hillman, William, Metallic Tube, Pat 418
Hill Mine, Colo 373
Hillside Coal & Iron Co., Pa 183
Hillside Group of Mines, Utah 87, 303, 327
Hillyer Mine, Minn 590
Hinton & New River Coal R. R., W. Va 111
Hitchcock, Hiram A 83
Hite Mine, Cal 60, 276, 300, 372
Hittson Gold and Silver Mg. Co., Mex 471
Hixon & Dyblie's Pat., Anode Casting 490
Hix T., Preston 587
Hoene Con. Coal and Iron Co 467
Hoepfner's Pat. Treating Zinc Carbonate 586
Hocking Valley Miners, Ohio 206, 422, 544
Hofman, H. O., Fusibility of Fire Clays 295
Hoffman, J. W. & Co 275
Hofman, Prof. H. O 540, 611
Hogan Boiler Company, N. Y 348, 444
Hogg, Geo. E., N. Y 274
Hogg, T. W., Abnormal Condition of Pig Iron 414
Hoisting Bucket, Mooris' Pat 34
Hoist, Electrical Mine 201
Hoist and Transfer, Sherman's Pat. 514
Holden Lixiviation W'ks., Colo 396
Holland, Iron Ore Exports to 553
Holoday, John W., Furnace, Pat 250
Holman's Pat. Brick Kiln 58
Holmes Mining Co., Nev 182, 278
Holtshouse Gold Mine, N. C 520
Holly, A. L 193
Holy Cross Mining & Milling Co., Colo 421
Holy Moses Mg. Co., Colo 181, 325
Holy Terror Mine, S. Dak., 15, 254, 303, 327, 543
Home Mine, Cal 180
Home Run Mine, Colo 495, 564, 615
Homestead Mine, Colo 157
Homestake Mg. Co., S. Dak., 69, 102, 165, 195, 260, 285, 381, 398, 405, 429, 453, 477, 501, 519, 525, 549, 573, 597, 621
Homestead Steel Works, Pa 179, 371
Hon rine Mg. Co., Utah 327
Hood Machine and Foundry Co., Ala. 83
Hope of St. Louis Mg. Co , Mont., 102, 110, 134, 158, 190, 285, 381, 405, 429, 477, 501, 525, 549, 573, 597, 621
Hoppe, Oscar. *Elementares Lehrbuch der Technischen Mechanik* 363
Hope Mining Co., Mont., Report 177
Hopkins, A. L 587
Horn Silver Mg. Co., Utah, 135, 141, 357, 381, 405, 429, 453, 477, 501, 525, 549, 573, 597, 614, 621
Horn Silver Mining Co., Utah. Report 269
Horn Silver Mining Co., Utah 207, 309
Horse Creek Placer, Wyo 423
Horseshoe Mine, S. Dak 15, 351
Horton, Stephen A., Well Drilling, Pat 370
Horton, Samuel Dana 203
Hotchkiss, George I., Trap Door for Mines, Pat 370
Hough, George 333
Houlehan, James, Magnetic Ore Separator, Pat 442
House, Henry A., Pat 226
Houston, Henry Howard 611
Howard-Harrison Iron Co 587
Howard Mine, Cal 116
Howe, H. M., Andrews' Researches on the Corrosion of Iron 99
Howe, Henry Marion 193
Howe, Henry M., and the Bessemer Medal 193

Howe, Henry M., Copper 195
Howe, Henry M., Kernel Roasting... 364
Howe, H. M., Possible Explanation of Kernel Roasting 104
Howe, Maurice S., Packer for Oil or Gas Wells, Pat 202
Huanchaca Mg. Co., Bolivia 39
Huautla Santa Ana Mg. Co., Mex.... 63
Hudson Iron Co., N. Y. 179
Hudson Mine, Mont. 134
Hudson River Water Power and Paper Co., N. Y. 227
Hufiye & Caldwell's Pat. Partially Decarburizing Cast Iron 610
Hufty, Samuel, Cast Iron Into Steel, Pat. 298
Hulda Mining Co., Col., 157, 205, 300, 516, 396, 421
Hulett, Geo. H., Device for Unloading Cars, Pat 323
Humboldt Mine, Colo 516
Humphreys, D. C., *Notes on Rankine's Civil Engineering* 314
Hungarian Mines, Electricity in..... 514
Hungarian Mine, Ore..... 86
Hurter, F., Alloy, Pat..... 202
Hurter, F., Cyanides, Process of Mfg., Pat..... 202
Hutchings, W. Maynard, Coal Used in Desilvering Lead..... 171
Hunt, A. E..... 371
Hunt, C. W., Co., N. Y..... 35, 251, 444
Huntley, D. B.... 563
Huntley, D. B., Co operative Experitive Experiment at the Morning Mine 27
Hunter, John N., Composite Steel Plate, Pat 394
Hunter Mine, Idaho..... 446
Hunter Valley Stone Co., Ind..... 157
Huntingdon & Broad Top Mt. R R. and Coal Co., Pa..... 69, 135
Huntington, Thos., Coal Used in Desilverizing Lead..... 291
Huston, S. W., Pa..... 324
Hutchinson, J. F., Cyanide of Potash Mfg., Pat..... 370
Hyde, Charles..... 59
Hydraulic Sluice Bearer, Pike's Pat.. 490
Hydrocarbon Burner, Gale's Pat 581
Hydrocarbon Furnace, Pat..... 391
Hydrocarbon Burner, Handy's Pat .. 82
Hydrocarbon Burner, Pat..... 20
Hydrogen Gas Machine, Pat..... 346

I

Ibex Mg. Company, Colo.....181, 300, 346
Ibex Mg. Co., Utah 39, 63, 207, 254
Ibex Mine Tram, Utah..... 279
Ickes Lode, So. Dak..... 543
Idaho-Alamo Mines, Br. Col..... 447
Idaho City District Mines, Idaho..... 182
Idaho City Gold Mine, Idaho..... 229
Idaho Mine, B. C..... 255
Idaho, Mineral Production..... 49
Idaho Northern R. R..... 86
Idaho Silver Mines, Sale of..... 145
Idaho Springs District, Colo..... 36
Idaho Springs Mills, Colo..... 468
Ideal Placer Mining and Water Power Co., Cal..... 204
Illinois Bankers' Ass'n..... 546
Illinois Central R. R..... 497
Illinois Mg. Co., Idaho..... 326
Illinois Steel Co., Ill 12, 89, 137, 141, 161, 179, 443, 491, 510, 587, 611
Illinois Zinc Works..... 447
Incandescent Lamps, Aluminum in.. 130
Income Tax Suits.....354, 378, 450, 498
Independence Mine, Colo..85, 183, 205, 421
India, Currency..... 115
India, Foreign Commerce..67, 235, 403, 619
India, Gold..... 75, 111
Indian Exchange..... ....Weekly
Indiana Claim, Colo 565
Indiana Oolitic Stone, Quarry Association, Ind..... 277
Indiana Steam Stone Works, Ind.... 277
Industria del Ore en Chile..... 435
Industrial and Trust Stocks....Weekly
Industrial Situation..... 481
Infringement of Patents, Limitation of Claims..... 25
Ingall, E. D., *Mineral Production of Canada*.....98, 409
Ingalls, Walter Renton, Tin Deposits of Durango, Mexico..... 293
Ingalls, Walter Renton; Nomenclature of Zinc Ores 292
Ingersoll-Sergeant Drill Co., N. Y ... 324
Ingersoll-Sargeant Drills, South Africa..... 40
Ingersoll-Sargeant Drill Co.'s Pat. Rotating Devices of Rock Drills..... 510
Ingot Pusher, Pat 346
*Injector, Brownley..... 513
Injuries Received on Dangerous Premises, Legal Decision..... 344
Inman, John H., Pa..... 471
Inspection District, Coal, 8th, Pa.... 254
Insurance Policy, Conditions..... 34
Insurance, Accident, Loss of Hand, Legal Decision..... 249
Inter-Mountain Railway Co., Colo.... 444
Inter-Ocean Mine, Colo..... 396
Inter-Ocean Placer Co., Wyo..... 567
Interest in Minerals, Sale of..... 538
International Copper Co., Ari..... 12
International Electric Co., N. Y..... 160
International Mining and Industrial Exposition 582
International Monetary Clearing House..... 121
International Monetary Conference, 169, 187
International Oil Refinery and Development Co., Mexico..... 255
International Postal Union..... 30
Iodide Assay for Copper.....124, 170
Iowa, Coal in Polk County..... 149
Iowa Geological Survey..... 363
Iowa Gulch Mg. and Leasing Co., Colo..... 13, 542
Iowa Mine, Idaho..... 517
Iowa Mg. Co., Nev..... 381
Irelan, Wm., Sr..... 131
Iridium, Magnetic Properties..... 10
Iron, American Market..... 337
Iron, Belgium..... 102
Iron, Boride, Properties of..... 250
Iron, Cast, Condition of Silicon in.. 458
Iron, Cast, Physics of..... 290
Iron, Cast, Testing of..... 367
Iron Clad Mg. Co., Colo..... 109
Iron, Converting Cast Iron into Malleable Iron or Steel, Pat 298
Iron, Corrosion, Andrews' Researches 99
Iron Desulphurizing, Saniter Process. 579
Iron, Displacement of Carbon by Boron..... 539
Iron, France 285
Iron, French Imports and Exports of. 200
Iron, Germany 82, 128
Iron, Gesner Anti-Rust Process..... 514
Iron, Graphite in 129
Iron Industry, France 367
Iron King Mine, New Mex 278
*Iron Making, Early, in North Carolina 559
Iron Market, Condition of..... 265
Iron Market, Colo 492
Iron Market, Buffalo.....Weekly
Iron Market, Cartagena, Spain..... 42
Iron Market, Chicago.....Weekly
Iron Market, Great Britain..... 50
Iron Market, Philadelphia..... Weekly
Iron Market, Pittsburg.....Weekly
Iron Market, New York..... .....Weekly
Iron Market Review..... .....Weekly
Iron, Marquette Range, Sales, Mich . 397
Iron Mountain Mine, Cal.....160, 325, 349
Iron Mine, Colo..... 516
Iron Mountain, Mont., 165, 195, 285, 357, 381, 405, 429, 453, 477
Iron Mountain Mg. Co., Mont., 501, 525, 549, 573, 597, 621
Iron Ore Exports to Holland..... 553
Iron Ore Imports..... 385
Iron Ore Market, Spain.....425, 522
Iron Ore Market, Cartagena, Spain... 138
Iron Ore Mining, Greece 511
Iron Ore Pool, Lake Superior....36, 41, 65
Iron Ore Prices, Lake Superior..... 90
Iron Ore Rates, Lake 328
Iron Ore Shipments, Lake Superior.. 606
Iron Ore Shipments, Minn.....446, 469
Iron Ore Shipments, New Jersey..... 470
Iron Ore Stocks, Lake Erie Ports..... 473
Iron Preserving, Krupp's Pat..... 610
Iron Prices .....Weekly
Iron Prices, Advance..... 617
Iron, Pig..... 337
Iron, Pig, Abnormal Condition of..... 414
Iron Pig, Advance in Prices..... 577
Iron, Pig, Arsenic in..... 608
Iron, Pig, Canada 514
Iron, Pig, Desulphurization of....313, 317
Iron, Pig, German Production..... 461
Iron, Pig, Mfg. of Pat..... 418
Iron, Pig, Production 241
Iron, Pig, Production of Great Britain in 1894 410
Iron, Pig, Weekly Production 433
Iron, Producing from Pyrites, Pat.... 370
Iron Production, German.....225, 270
Iron Production, Russia..... 82
Iron Production, U. S 73, 75
Iron Production in U. S., in 1894..... 75
Iron Pudding, Wages Scale 328
Iron, Railroad Rates..... 137
Iron River Mine, Mich..... 493
Iron Sales, Pittsburg..... 42
*Iron, Scotch Pig, Manufacture 536
Iron Shipments, Alabama..... 449
Iron and Steel, British vs. American. 170
Iron and Steel Imports 593
Iron and Steel Institute, Journal of.. 218
Iron and Steel, Process of Making, Pat 250
Iron and Steel Workers, Amalgamated Ass'n 59
Iron Trade, Strikes..... 424
Ironton, O., Coal & Iron Co..... 491
Ironton Furnaces, O..... 107
Ironton, O., Industrial Notes..... 251
Iron Trade, 1894..... 2
Iron Trade Ass'n, Midland, Sheffield, Eng..... 227
Iron Trade, Buffalo, 1894..... 8
Iron Trade, Chicago, 1894..... 8
Iron Trade, Condition..... 554
Iron Trade, Germany..... 605
Iron Trade, German and Belgian..... 242
Iron Trade, New York, 1894..... 4
Iron Trade, Philadelphia, 1894..... 4
Iron Trade, Pittsburg, 1894..... 8
"Iron Trade Review"..... 51
Isabella Furnace Co., Pa..... 540
Isabella Gold Mg. Co., Colo....79, 135, 228, 349
Iszard Mine, Colo..... 396
Italy, Bank of..... 163
Italy, Electric Transmission of Power 322
Italy, Mineral Industry..... 105
Italy, Salt Duties..... 307
Ivanhoe Furnace, Va..... 179
Ivanhoe Mine, Utah..... 591
Ivanhoe Mg. Co., N. Mex..... ...230, 470

J

Jack G. Claim, Colo. 615
Jackson, Cal. 195
Jackson Creek District, Mont..... 158
Jackson & Evans, Pa..... 540
Jackson Gold Fields Co., Cal..... 597
Jackson Mg. Co., Cal ...156, 165, 285, 357, 381, 405, 429, 453, 477, 501, 525, 549, 573, 597, 621
James, G. D., Cripple Creek Mines... 314
James, J. H. Cordner..... 611
James' Pat. Handling Brooms..... 490
James, W. H. T 611
James, Louis 491
Jameson, Charles D., *Portland Cement*..... 578
Japan, Bank of..... 187
Japan-China Treaty...354, 361, 402, 450, 525
Japan-China War..... 43
Japan, Coal. 111
Japan, Foreign Trade. 619
Japan-Germany Treaty..... 211
Japan, Gold Standard. 67
Japan Mine, Colo. 109, 301, 445
Japan, New Loan..... 235
Jay Gould Mg. Co., Nev..... .....167, 191, 213, 237
Jay Hawk & Lone Pine Mg. Co., Mont 93, 543
Jeddo Tunnel, Pa 110, 374, 591
*Jeffrey Mfg. Co. Electrical Mine Hoist 201
Jeffrey Mfg. Co., O..... .....395, 419
Jeffrey, W. H..... 443
Jellico-Birdeye Coal Co..... ... 563
Jenes' Pat. Refin. Zinc Spelter..... 586
Jerzmanowski's Pat. Producing Gas. 610
Jessie Mine, Colo 85, 180, 276
Jicarillas Gold Camp, N. M..... 123
Jig, Pneumatic, Pat..... 466
Johnson Ore Beds, O 15
Johnson Steel Co., O.....324, 371, 395, 671
Joining Metals, Method of. Pat..... 250
Joint Metallism..... 602
Jolly Tar Mine, Colo 615
Jones & Laughlin's Co., Pa..... 443
Jones, Geo. W., Rock Drill, Pat..... 250
Jones Mg. Co., Utah 621
Joplin Ore Market, Mo..... 14
Joplin Zinc and Lead Mines..... 374
Joseph Dixon Crucible Co. Meeting.. 420
Josie Mine, B. C..... 255
Joss Bros. Granite Co., Mass..... 613
Joule's Thermometers Compared. 201
Julia Con. Mg. Co., Nev., 191, 213, 237, 285, 309, 333, 495
Julian Mg. Co., Colo 568
Jumbo Mine, Pa..... 351
Jumbo & Milan Mine..... 492
Junction iron and Steel Co., O.35, 275, 324, 540
Juneau Mg. Co., Alaska 515
Juniata Furnaces, Pa..... 563
Jupiter Mine, Colo..... 133
Justice Mg. Co., Nev., 14, 62, 86, 110, 159, 183, 189, 191, 213, 237, 278, 285, 302, 309, 326, 427, 477, 494, 501, 525, 549, 567, 573, 975

K

Kainit, Prices.....Weekly
Kanaka Mine, Cal..... 84
Kanawha & New River Coal Co., W. Va..... 121
Kanimapoo Gold Mg. Co., Br. Guiana..... 417
Kansas City Con. Smelting Co., Mo.. 16
Kansas City, Ft. Scott & Memphis R. R 204
Kansas City Steel & Iron Co., Kans.. 419
Kansas State Coal Mines 61
Kapanga Mine, New Zealand 495
Kapp, Gisbert, *Alternating Currents of Electricity*..... 2
*Kase, J. D., Early Iron Making in North Carolina 559
Kearsarge Mg. Co., Mich.....158, 277, 566
Kearsarge Mg. Co., Mich., Report.... 200
Keller, Hermann A., Roasting Fur. Pat 226
Kellogg, George F..... 35
Kendall, Edward D., Recovering Gold and Silver from Solutions, Pat..... 442
Kennan's Pat. Treating Ores..... 562
Kennedy, John S..... 587
Kennedy Mg. Co., Cal.. 102, 195, 285, 357, 381, 395, 405, 429, 453, 477, 501, 525, 549, 573, 573, 597, 621
Keno Mine, N. Mex..... 590
Kent, William,..... 419
Kent, William, *Mechanical Engineers' Pocketbook*..... 460
Kentuck Con. Mg. Co., Nev..... 23
Kentucky Belle Mine Co., Colo., 61, 228, 300, 567
Kerby, E. B., Sampling and Measurement of Ore Bodies..... 196
Kernan, John, Valve Gear, Pat..... 298
Kernel Roasting, A Possible Explanation of.....101, 147, 195, 267, 339, 364, 411
Keuffel & Esser Co., N. Y 12
Keyes, Horatio, Mine Trap Door, Pat. 202
Keystone Cyanide Plant, S. Dak..... 183
Keystone Development Co., Colo.... 277
Keystone Iron Works, Pa..... 540
Keystone Mill, Cal..... 252
Keystone Mill, S Dak..... 254
Keystone Mine, Colo..... 564
Keystone Mg. & Milling Co., Nev.. 565, 613
Keystone Slate Quarry, Pa..... 15
*Kidwell, Edgar, Improved Rock Cutter..... 513
Kidwell, Edgar, Stamp Sand in Cement Mortar..... 173
Kildonan Gold Fields, Gt. Britain.... 447
Kilkenny Granite Co., N. H..... 278
Kiln, Thomas, Pat..... 610
Kimball, James P., N. Y..... 324
Kimberly Roodeport Mine, S. Africa.. 207
King, Gilbert & Warner, O..... 419
King's Pat. Dredging Machine..... 586
King of the Rockies Mfg. Co., Colo.. 37
King Solomon Mine, Ariz..... 108
Kingman, Lewis..... 491
Kingston Coal Co., Pa 614
Kingston, O., New Steel Plant..... 515
Kingston School of Mining..... 179
Kinkead, James H., Rock Crusher & Grinder, Pat..... 442
Kiowa Coal Co., Ind. Ter..... 37
Kipton Stone Co., O..... 86
*Kirby, Edmund B., Sampling and Measurement of Ore Bodies... .221, 247
Kirkham Mine, Cal..... 612
Kirkwood, Daniel 563
Kisawlee Mining Co., Colo..... 228
Kitchen Mines, Colo..... 228
Klein, J., Rollers for Compressing Electrio Deposited Metals, Pat. 370
Klein's Pat. Pump for Gas Wells.... 11
Kleinschmidt, Kurt..... 131
Kleinschmidt, M..... 83
Klotz, Robert 419
Knapp, M., A Possible Explanation of Kernel Roasting..... 339
Knight & Co., F C..... 611
Knott Mine, Idaho..... 36
Knox & Boyle Gold Mine, Cal..... 36
Knox, Wm..... 371
Koch's Pat. Rotary Feed for Rock Drills..... 490
Kouhoupt's Pat. Stone Cutting Machine..... 539
Koninck, L. L. de, Determination of Sulphur in Iron 441
Kootenai Mine, Br. Col..... 471
Kootenai Water Supply Co., Wash.. 518
Kraft, Wm..... 611
Krah's Pat. Coal Dust Binding Material..... 34
Krauss, Theodore, Bullion Sampler, Pat..... 370
Kretz, Herman..... 443
Krough Mfg. Co..... 587
Krupp's Pat. Iron Preserving..... 610
Kylindrite 535

L

Labor Commissioners' Report on Slums of Baltimore..... 387
Labor Question..... 460
Labor Unions, Incorporation of. 458
Lady Washington Mine, Cal..... 227
La Belle District, N. M..... 555
La Belle Iron and Steel Wks..... .. 467
Laclede Fire Brick Mfg. Co., Mo.. 275
La Grange Mg. Co., Cal., 285, 309, 333, 357, 381
La Noria Mining Co., Mexico..... 231
La Panza District Mines, Cal..... 372
La Plata Mines Co., Colo..... 69
La Rue & Hogan Mines, Minn..... 589
La Yesca Mg. Co., Mex 93
La Candelaria Mine, Mex.. 285, 309, 333, 357, 381
Lackawanna Coal Co., Pa..... 15
Lackawanna Iron and Steel Co., Pa., 299, 611
Lackawanna Mine, S. Dak., 63, 254, 446, 543
Lackie, A R. T..... 443
Lake Carriers' Ass'n..... 64
Lake City District, Colo..... 612
Lake City Gold and Silver Extraction Works, Colo 612
Lakeview District, Idaho..... 37
Lake Erie, Alliance & Southern R.R., O..... 159
Lake Hancock Phosphate Co., Fla... 157
Lake Shipbuilding..... 64
Lake Superior Con. Mines, Minn., 205, 517
Lake Superior Iron Co., Mich.... 37, 517
Lake Superior Iron Ore Combination, 36, 41, 65
Lake Superior Iron Ore Prices..... 90
Lake Superior Iron Ore Shipments... 606
Lake Superior Mining Inst..... .....203, 245
Lake View Mine, Colo 516
Lake Water Levels..... 592
Lake of the Woods Coal Mine..... 566
Lake of the Woods Gold District, Ont. 152, 195, 231, 519
Lamarque Mine, Cal..... 227
Lamborn, Robert H..... 59
Lampert, Jacob, Concentrator, Pat... 202
Lamphyre Mine, Cal..... 156
Lamps, Miners', Method of Lighting, Pat..... 370
Langlaagte Deep, Transvaal..... 519
Langley, R. D., Crusher, Pat 250
Langston Mine, N. Mex..... 326, 446
Language of Bolivian Aborigines..... 370
Lanyon & Co. Mines, Mo..... 229
Laramie Chemical Works, Wyo..... 447
Laramie Coal Mine, Wyo..... 544
Last Chance Mining Co., Colo..... 325
Last Chance Mg. Co., Idaho 542, 615
Last Chance vs. Tyler Mg. Co., Idaho..... 86
Laura & North Star Mine, Cal..... 549
Laurel Run Coal Co., Pa.....230, 326, 351
Laurel Coal Association, Ky..... 421
Laurie Stone Co., Wis..... 280
Lauter Creek Gold Mines, Ala..... 468
Latham Mine, Ga..... 86
Latham Quarry, Mass..... 277
Latin Union, Minor Coins..... 405
Laval's Pat. Steam Turbine 58
Law, Commercial 557
Laws, Herbert, *Telephone Hand Book*..... 314
Lawrence Chlorination Works, Colo. 132
Lawrence Gold Extraction Co., Colo.. 469
Lawyer Mine, Idaho..... 517
Lead, Argentiferous, Separation of from Biende, Pat..... 370
Lead Chromate, Mfg. of, Pat..... 466
Lead, Desilverization of. Coal used 171, 195, 267, 291
Lead, Fumes, Treatment, Pat..... 418
Lead Imports, France..... 213
Lead Production in the U. S., in 1894. 265
Lead Market, 1894..... 6
Lead Market, Spain.....236, 427
Lead Market..... .....Weekly
*Lead Smelting in Scotland..... 175
Lead and Zinc, Hist. of..... 51, 124, 219
Lead Ore Market, Joplin, Mo.....Weekly
Lead and Zinc Mines, Mo..... 206
Leadville Claim, Colo..... 36
Leadville & Chicago Mg. Co., Colo... 133
Leadville Development Co., Colo..... 300
Leadville Gold Belt, Colo....13, 37, 77, 277, 396
Leadville Gold Mg. Co., Colo..... 109
Leadville Hydraulic Mining, Colo.... 61
Leadville L't'd Mg. & Milling Co., Colo..... 325
Leadville Mine, Colo 157
Leadville Mg. & Leasing Co., Colo.... 372

Lease, Action to Forfeit. Legal Decision 344
Lease, Mining 582
Lease, Right of Rescission by Lessor .. 82
Lebanon Pink Granite Co, N. H 278
Lebanon Rolling Mills, Pa 347
Lecompton Mine, C lo 568
Ledebur, Constitution of Steel 437
Lee, Harry A 491
Lee ine, Ala 84
Leechburg Foundry & Machine Co., Pa 347
Leesport Furnace, Pa 107
Legal Decisions Affecting Mining Industry 248, 273
Legal Tender Mine, Mont 110
Legal Tender Notes, Funding 18
Leggett, Thomas H 236
Le Grand's Pat. Mining Machine 614
Lehigh Canal, Pa 326
Lehigh Coal and Navigation Co. Report 177
Lehigh Coal and Navigation Co., Pa., 189, 206, 279, 397, 453
Lehigh & New England Railroad Co., Pa 326
Lehigh Traction Co., Pa 591
Lehigh University 131
Lehigh Valley Coal Co., Pa ..53, 89, 135, 567, 614
Lehigh Valley R. R. Co., Pa 39, 254
Lehigh Valley and Reading Coal War 232
Lehigh & Wilkes-Barre Coal Co., Pa., 141, 165, 230
Lehigh Zinc Works, Pa 515
Lehigh Zinc and Iron Co 601
Lehnen, Nicholas, Amalgamation of Ores, Pat 250
Leishman, I. G. A 371
Lemp, Hermann, Electric Metal Working Apparatus 250
Lens Work for Amateurs 460, 554
Lencanchez's Pat. Refining Iron 586
Lemni Gold Mg. Co., Idaho 542
Lenoir Car Co., Tenn 12
Leo Mg. & Milling Co., Utah 543
Leon Mine, Cal 180
Leonard, Franklin 621
Leonti Mine, Cal 516
Lepierre, Chas., Study of Iron Chromates 342
Le Roi Mining Co., B. C 255, 490
Le Roi Mine, Wash 544
Leroy-Beaulieu, Paul, Political Economy 213
Leroy-Beaulieu, World's Production Precious Metals 198
Leschen & Sons, A., Mo 275
Lessor, Rights to Rescission of Lease. 82
*Level, Gradient-Telemeter 176
Lewes, Vivian E., Mfg. of Gas 466
Lewis, Harry J., Converter. Pat 418
Lewis, Mine Inspector, Pa, Annual Report 397
Lewis Mill, Colo 300, 565
Lewis and Clarke County, Mont 483
Lewiston Gold Camp, Wyo 423
Lewiston Mine, Wyo 494
Liability for Failure to Prop Roof, 33, 81
Liability of Master 34
Liability of Landowners 274
Liability of Master for Defective Appliances 297
Liability of Principal to Agent 297
Licking Rolling Mill Co., Ky 107
Lidner, P. G 491
Light, Colored, Effect of on Color 370
Light from Welsbach Mantles 58
Lillian Mine, Colo 492
Limekiln, Pat 226
Limitations, Statute of, on Patents ... 105
Lincoln Mill, Colo 300
Linden Steel Co 419, 540
Linderman, Robert P 371
Link Belt Machinery Co., Ill 419, 467
Linn & McCoy's Iron Wks., Pa 371
*Liquefaction of Gases 318
Litharge, Process of Mfre. Pat 370
Little Alma Mine, Mont 158, 231
Little American Mine, Minn 513, 590
Little Annie Mine, Colo 157, 469
Little Chief Mg. Co., Minn 397
Little Chief Mine, Utah 446
Little Cottonwood Mine, Utah 135
Little Emma Mine, Colo 534
Little Fanny Mine, N. M 62, 279
Little Joker Mine, Colo 60
Little Johnnie Mine Ill 591
Little Kate Mine Colo 565
Little Nell Mining Co, Colo 228
Little Nell Mine, Mont 158, 229
Little Phil & Black Diamond Mines, B. C 303
Little Pittsburg Mine, Colo 181
Live Oak Drift Gravel Mining Co., Cal 333
Live Oak Mine, Cal 108, 333
Liverpool Mine, Mont 158
Livingstone Coal and Coke Co., Mont 134
Livingstone Mine, Colo 516
Llatas' Pat. Crucible Steel 490
Lloyd, J. E., *Report on Labor and Mines, Tennessee* 98
Lloyd-Booth Co., O 12, 611
Loading Machine. Pat 202
Location of Mines, Evidence as to. Legal Decision 249
*Locomotive Electric, for Mines 33
Locust Mt. Coal and Iron Co., Pa 141
Lock & Wilson Grand Claim, Cal 612
Lockhart Mine, Ga 109, 181, 492
Lochiel Rolling Mill, Pa 281
Lodge & Davis Machine Tool Co., O .. 131
Logan, John A, Mine, Colo., 16, 85, 228, 276
Logan Coal Co., W. Va 135
Logan & Janeway's Pat. Making Gas. 490
London Mine, Colo 228
London Mining Stock Market .... Weekly
London Mining Stock Quotations. Weekly
London, New Capital 187, 259, 355, 571
Londonderry Iron Co., N. S 227, 348
Lone Hill Mine, Cal 324
Lone Jack Mine, Colo 37
Lone Jack Iron Mine, Minn 61
Lone Star Furnace, Tex 324
Lone Star Quartz and Gravel Mg. Co., Cal 45
Lone Star Iron Co., Tex 107
Long, Frederic H., Recovery of Precious Metals from their Ores, Pat .. 370
Longfellow No. 2 Mine, Colo., 60, 85, 228, 396, 495, 564
Longfellow & Mack Mine, Cal 84
Longitudes, Bureau de, Annuaire 147
Longmaid, John, Reaction of Cyanide of Potash 435
Longmead Iron Co., Pa 179
Longstreet Mine, Ga 157, 542, 613
Longwall Working, Modified System. 464
Longyear & Bennett Iron Mines, Minn 37
Loomis District, Wash 591
Lookout Mg. Co., Mont 110, 543
Lookout Rolling Mill, Tenn 59, 611
Loretto Mine, Mich 517
Loss of Life in Mines 178
Losson, Clemens, Deodorizing Mineral Oils 370
Lost Anna Mine, Colo 85
Lost Annie & Lowell Mine, Colo 276
Lottie Mine, Cal 276
Loud Mine, Ga 493
Louisiana Mine, Cal 156
Louisville Mine, Colo 13
Louise Mine, Colo 252, 492
Lovett, Thos. J., Pat 226
Low, A. H., Iodide Assay for Copper, 124, 170
Lowder Gold Mine, N. C 590
Lowe, Robert N., Air Compressor, Pat 226
Lowell Mine, Colo 85
*Low Moor Iron Co., Va 128
Lowry, F. W 591
Lowry's Pat. Gates Type of Rock Crusher 610
Lowry's Pat. Stone Breaker 58
Loyal & North Gover Mine, Cal 13
Lucky Boy Mine, Idaho 182, 326
Lucky Bill Mg. Co., Utah, 477, 501, 525, 549
Lucky Coon Mill, Minn 301, 470
Lucky Cuss Mg. Co., So. Dak 614
Lucky Girl Mine, Colo 205
Lucky Gus Mine, Colo 495, 561, 589
Lucky John Mine, Cal 372
Lucile Mining Co., S. Dak 167, 191, 213
Lucille Mine, Cal 13
Lungwitz, Emil E., Process for Smelting Ores. Pat 466
Luke Fiddler Colliery, Pa 62, 302
Lump Gulch District, Mont 158
Lykens Valley Coal Co., Pa 87, 254
Lyle Mine, Minn 158
Lynn Coal Co, W. Va 135
Lynx Creek Mg. Co., Ariz 180

M

McAdams & Corwin Cement Beds, Ohio 614
MacArthur, T. S., Copper Precepitation, by Cyanide Process, Pat 370
MacArthur-Forrest "Cyanide Process" 217, 223
MacArthur's Pat. White Lead Making 496
Macauley Mg Co, Mont 14
McAfee Lime Works, N. J 86
McCalley, Henry 515
McCalmont Oil Co., Pa 63
McClure Coke Co., Pa 64
McClure Construction Co 467
McConnell & Irwin Mine, Cal 549
McConnell, Munhall, Manfre. of Alloys, Pat 391
McConnell & Pacific River Mine, Cal. 319
McComb's Mine, N. Car 591
McCoy & Linn, Pa 347
McCullough, Hugh 523
McDonald Stone Co., N. Y 279
Macdonald, A. R., Queensland 471
McDonough Coal and Coke Co., W. Va 494
Mach, E., *Popular Scientific Lectures* 98
Mach, Ernst, *Popular Scientific Lectures* 363
Machine for Compressing Fuel, Cochrane's Pat 610
Machine for Drilling Rock, Yithen's Pat 514
Machinery, Dangerous, Injury to Servant 538
Machinery Not Fixtures 488
Machinery, Sale of 508
Mackey's Pat. Potassium Cyanide ... 490
Mackey, W. M., Cyanide of Potash Mg. Pat 370
Mackintosh, Hemphill & Co., Pa 251
McDougal's Pat. Mining Method 34
McGee, W. J, *Uniformitarianism and Deformation* 123
*McGeorge Gas Engine 10
McGill, Daniel, Air Compressor, Pat 250
McGill University 419
McGlew Ore Concentrator Co., Cal 107
McGranahan's Pat. Metallurgical Furnace 82
McHaney Bros. Claim, Cal 420
McHugh Mine, Cal 180, 212
McKay & Co., Pa 540
McKellar's Pat. Rotating Pulverizers 586
McKeller, Peter, Rock Pulverizer, Pat 323
McKeller, Peter, Silver Mines of Thunder Bag 391
McKiernan Drill Co., N. J 63
McKinnon, Rock Pulverizer, Pat 323
McKinley Iron Mine, Minn 253
McKinley-Williams Suit, Minn 37
McLauthlin's Pat. Pulverizer 58
McPherson, Wm. B., Automatic Feed for Pulverizing Mills, Pat 250
Madagascar Gold Field 207
Madison Mining Co., Colo 325
Madera Mg. Co., Cal 429
Magalla Mine, Cal 372
Magnesia, Effect of on Blast Furnace Cinder 289
Magnet Mg. Co., Mont 429, 453, 477, 501, 525, 549
Magnetic Ore Separator, Pat 442
Magnetic Separator, Pat 323
Magnice John 254
Magnesia and Sulphur in Blast Furnace Slag 52, 75
Magnesium, Prices ..... Weekly
Mahala Mine, Colo 37
Mahoney & Wildman Mine, Cal 13
Mahoning Iron Ore Co., Minn 253
Mahoning Mine, Minn 416
Mahoning Ore Co., Minn 37, 61, 158, 184, 350, 542
Maid of Erin Silver Mines, Colo 277
Malone Stone Co., Ind 277
Mahoning Valley, Pa 563
Mahoning Valley Iron Co., O 179, 317, 540
Making Consolidated Sulphuric Acid, Flading's Pat 586
Making Cyanides, Castner's Pat 610
Making Gas, Logan & Janeway's Pat. 490
Making Pure Pig Iron, Richardson's Pat 490
Makotaw Mining Society Meeting 324
Malleable Iron Fitting Co., Conn 515
Malleable Iron Works, Wis 324
Mammoth Mill, Ari 252
Mammoth Mine, Ari 156
Mammoth Mine, Cal 156
Mammoth Mine, Colo 85
Mammoth Mine, Idaho 397, 542
Mammoth Mine, N. Mex 446
Mammoth Mg. Co., Utah 614
Manchester Ship Canal, Excavators Used 101
Manganese, Georgia 585
Manganese Ore 476
Manganese Sulphate Production, Davis' Pat 35
Manhattan Mine, Colo 85
Manufacturers Association, Pa 179
Manufacturers' National Ass'n 60
Manufacturers' National Convention. 108
Manufacturing Pipe. Pat 394
Mfg. of Gas, Merrifield's Pat 610
Manufacturing Gas, Pinkney Pat 562
Mannhe's Pat. Extracting Nickel 496
Marcellot, E., Zinc Alloy Pat 202
Marcus, M. M., Zinc Alloy Pat 202
Marguerite Mine, Cal 276
Marion Gold Mg Co., Utah 63, 591
Mariposa Commercial and Mg. Co., Cal 84
Mariposa Mg. Co., Cal 453
Maritime Canal Co., Nicaragua 405
Market Letters of Clapp & Co 363
Markle & Co, Pa 494
Marriott, Iron and Gold in Brazil 339
Marriott's Pat. Drill Screws 154
Marsac Mine, Utah 614
Marsden C. L., Coal Property in W. Va 207
Marsh Iron Mine, Ga 492
Marshall Mining Co, Colo 252
Martin Bros.' Quicksilver Mine, Cal .. 444
Martha Washington Mine, Colo 228
Marshall Coal Mine, Colo 13
Martel Furnace, Mich 107
Martin's Pat. Fuel Gas Retort 562
Martha Washington Mine, Colo 421
Mary Ellen Mine, Wyo 544
Mary Iron Furnace, Ohio 227
Mary Lee Coal & Railway Co 468
Mary Mine, Nev 422
Maryland Coal Co., Md 69, 117
Maryland Con. Mg. Co., Cal 501
Maryland Elec. Co., Md 540
Maryland Gold Quartz Mg. Co., Cal .. 429
Maryland Steel Co., Md., 131, 161, 468, 588
Mascot Mine, Cal 588
Mascoutah Coal Mines, Ill 134
Mashonaland, S. Afr., Mining Law .. 472
Mashonaland The Beira Ry., S. Afr. 255
Mashonaland and Matabeland 243
Mason's Pat. Method of Excavation. 32
Massillon Coal District, O 39
Master, Duty to Servant 82
Master, Liability of 34
Mason & Barry Co., Portugal, Report 485
Massachusetts State Agricultural Station 483
Matches, Lucifer, Inventor of 274
Matchless Mine, Colo 61, 319
Mathewman, F. A., Condition of Carbon in Steel 80
Mattie Mine, Utah 87
Mattie W. Mine, Colo 109
Matchless Mine, Colo 205
Mattie Mg. Co., Utah 183
Maude Monroe Mine, Col 396
Maud S. Mine, New Mex 289
Maud S. Mine, N. M 62, 470, 590
Mawson, B., Lighting Miners' Lamps, Pat 370
Maxwell, Eugene L 155
May Queen Silver Mine, New Mex. .. 230
Mayflower Gravel Mg. Co., Cal., 13, 102, 189, 195, 237, 357, 381, 405, 429, 453, 477, 495, 501, 525, 549, 573, 597, 621
Mayflower Mine, Cal 180
Mayflower Mine, Cal. Div 285
Mayflower Placer Mg. Co., Cal 180
Maynard, Geo. W 231
Mazatzal Mine, Ari 611
Mead, Edward H 131
Mead, W. E., Ward Mining District, Colo 387
Mears, Otto 587
*Measurement of Ore Bodies 247
Mint Receipts, Sydney, N. S. W 211
Mechanics, Elem. Principles of 218
Mech. Eng., Trans. Am. Soc 218
Mechanical Engineers' Pocketbook ... 460
Mechanical Equivalent of Heat 201
Mechanics, Nystrom's Pocketbook ... 554
Mechanik, Elementares Lehrbuch der Technischen 363
Mechanical Equivalent of Heat 58
Mecklenberg Iron Works, N. C 59
Mecars Mining Co., Utah 231
Meerschaum Mining in Turkey 464
Meier, John W 491
Meissner Engineering Co., Pa 324
Melting Furnace, Wellman's Pat 610
Means & Russell Iron Co 587
Mendenhall's Pat. Gold Mining Device 586
Menomonee Falls Lime & Stone Co., Wis 614
Merced Gold Mg. Co., Cal 84, 227
Merchants' Coaal Co., Md 233
Merchants' Exchange 467
Mercur, Utah 195
Mercur Gold Mg. Co., Utah, 63, 87, 102, 189, 207, 231, 471, 543, 207, 279, 303, 309, 327, 429, 549, 285, 357, 381, 405, 429, 453, 477, 501, 525, 549, 573, 597, 621
Mercur Water Co., Utah 279, 471
Mericheuski, Moska, Carburetor. Pat 202
Merwin, G. S. & Co., Ill 16
Merrifield's Pat. Mfg. of Gas 610
Merrill, C. W., English Decision in the Cyanide Case 531
Merrill Mfg. Co., N. Y 348
Merrimac Mine, Cal 84
Merrimac Mg. Co., Cal., 453, 477, 501, 525, 549, 573
Mary Ellen Mine, Wyo 111
Merrimac & Benson Mine, Col 541
Merritt & Rockefeller 349
Merritt Rockefeller Iron Syndicate ... 517
Merritt vs. Rockefeller Suit in Law 589, 301
Mesabi Chief Co., Minn 184
Mesabi Chief Mine, Minn 205
Mesabi Iron Co., Minn 589
Mesabi Iron Lands, Minn 253
Mesabi Range, Minn 566
Metals, Amalgamating and Separating, Pat 370
Metals, Apparatus for Casting, Pat .. 274
Metals, Casting of, Pat 370
Metal, Electric Heating, Pat 370
Metals, Exports and Imports .... Weekly
Metals, Extracting, Guillaume's Pat. 11
Metals, Fluidity of 539
Metal Market, New York, 1884 5
Metal Market, New York ..... Weekly
Metals, Method of Joining, Pat 250
Metal Mixers of the Northeastern Steel Co 557
Metals, Mixing of, Pat 226
Metal Reduction, Pat 418
Metal Refining, Aluminum in 57
Metal Separation, Moebin's Pat 58
Metal Treating, McIlreild & Nash's Pat 562
Metal and Mineral Production, U. S .. 506
Metallic Chromium Manganese, Vantin's Pat 586
Metallic Extraction Co., Colo 469
Metallic Tube, Pat 418
Metallurgical Furnace, Barlett's Pat. 490
Metallurgical Furnace, Conley's Pat. 539
Metallurgical Furnace, Talbot's Pat. 562
Metallurgical and Chemical Handbook 26
Metaux, Societe de 285
Metric System in Turkey 368
Metropolitan Marble Co., N. Y 613
Mexico, Foreign Commerce 475
Mexico, Exposition 154
Mexican International Ry 355
Mexico, Mining in 231
Mexico, Mining Stock Quotations, Weekly
Mexico, Mining Tax 529
Mexico, Mining Titles 207
Mexico, New Railroad 303
Mexico, Silver Exports 67
Mexico, Statistical Report 483
Mexico, Tariff 307
Mexico, Taxes on Gold and Silver 486
Mexico, Tales on Mining 482
Mexico, Tin Deposits at Durango 293
Mexican Exposition 606
Mexican Mine, Mont 517
Mexican Mine, Nev 543
Mexican Mg. Co., Nev., 14, 23, 47, 71, 95, 110, 525, 549, 573, 597, 621
Mica, Method of Grinding, Pat 202
Michigan Agricultural Station 483
Michigan Mining School 371, 515
Michigan, Report on Farm Products. 483
Michigan Stone and Supply Co., Mich 277
Michilla Mines, Chile 615
Microscopical Analysis of Steel 79
Midas Gold Saving Mach. Co., 204, 275, 587
Midas Petroleum and Improvement Co, Pat 237
Mienisch's Pat., Extracting Gold and Silver from Ores 610
Middleon Blue Spring Mine, Fla 373
Midway Block Coal Co., Pa 351
Miles' Pat. Air Compressor 11
Miles, Thos S., Conveyor, Pat 442
Miller, John F., Oil Burner. Pat. ... 226
Miller, John H., Gas Generator 226
Miller, J. P. K., Pa 324
Miller & Holmes' Gold Mine, Cal .. 36
Miller, W. C 510
Mill Work and Steam Power 531
Mills' Pat. Oil Purifying 82
Mills, Pulverizing Feed for, Pat 250
Mills, W., Making Iron from Iron Pyrites. Pat 370
Minas Prietas Mg. Co., Mex 45
*Mine, Electric Hauling and Signaling 33
Mine Examination, Measurement of Ore Bodies 196
Mine Exploration Expenses 488
Mine Explosion, Hobenegg, Austria .. 558
Mine Faces, Experiments with 370
Mine Hill, N. J 621
Mine Inspector's Report 2d Dist. Pa .. 206
Mine Owner, Liability of to Injury to Miner. Legal Decision 273
Mine Roof, Failure to Prop 81
Mine Surveys, Colo 227

Mine Trap Door, Pat.... 202
Mine Trap-Door, Herth's Pat 586
Mine Workers of America, United Meeting 397
Mine Workers' Coal Co., Ill. 89
Miner, Skill 489
Miners of Brazil 125
Mineral Cabinet, Glenn, Catalogue... 98
Mineral Farm Con. Mg. Co., Colo.... 13, 133, 157, 228, 421
Mineral Hill, Colo 252, 325, 349, 6 2
Mineral Fuel, Chile 609
Mining Industry, Headquarters...169, 193
Mineral Industry, Italy 105
Mineral Industry," Vol. II., 124, 147, 243, 214
Mineral Land Commission 487
Mineral Land Commission, Mo 517
Mineral Land, Damages for Railroad. 489
Mineral and Metal Production of the U. S. 506
Mineral Oils, Deodorizing, Pat.... 370
Mineral Oils, Exports 372
Mineral Point Mine, Idaho 205
Mineral Production, Canada.....98, 484
Mineral Production, Idaho 49
Mineral Production, New Zealand... 30
Mineral Surveys, Colo.... ....180, 372, 444
Minerals of the Transvaal 51
Mineralogy, Crystallography and Blow Pipe Analysis 387
Miners' Association of Cal..... 227, 348
Miners' Association of Ohio, Meeting 397
Miners, Caution to American. 51
Miners Convention, River and R. R., Pa 398
Miners of Cornwall, England..... 241
Miners' Eight-hour Day..... 562
Miner's Lamp, Pat... 418
Miner's Lamps, Harrison's Pat..... 490
Miner's Safety Oil Lamps, Richard's Pat. 586
Miner's Spooning Tool, Varney's Pat. 539
Miner's Strike, Pa 494
Miners' Lamps, Safety Lock for, Pat.. 418
Miners' Safety Lamp, Pat.... 418
Miners' Safety Lamp, Dahlmann's Pat. 154
Miner's Spooning Tool, Varney's Pat. 11
Miners' Union, Cœur d'Alene....481, 529
Miners' Union in Idaho... 433
Miners' Wash-houses in Germany.... 586
Mines of Colorado 276
Mines, Tennessee, Report 98
Mines, Ventilation 578
Mineur, Aide-Memoire 123
Mining Association of Ohio, Auxiliary 422
Mining at Bendigo 29
Mining, British Columbia 128
Mining Bureau, California 99
Mining Companies, Dividends 102
Mining Companies, Great Britain.... 97
Mining Companies, Stocks and Statistics... Weekly
Mining Contract, Construction.... 11
Mining Cost, South Africa. 529, 535
Mining Exposition 217
Mining Exposition at Santiago, Chile. 174
Mining Exposition of Colorado..... 321
Mining Exposition at Denver..... 431
Mining near Helena, Mont. 26
Mining and Industrial Association.. 342
Mining Industry of Bolivia..... 438
Mining Industry, Headquarters... 1, 25, 49, 73, 97, 121, 145
Mining Lands, Co-tenants 538
Mining Lands, Quitting Title... 538
Mining Law, Mashonaland, S. Afr.. 472
Mining Lease 582
Mining Machine, Pat.... ....226, 346, 418
Mining Machine, Coal, Harrison's Pat. 82
Mining Machine, Dobson's Pat 539
Mining Machine, Gray & Tarbit's Pat. 106
Mining Machine, Le Grand's Pat.... 610
Mining Machine, Wigg's Pat 610
Mining Machine Cutter, Wigg's Pat. 82
Mining Manual, 1895 ....483, 531
Mining Method, McDougall's Pat... 34
Mining, New Zealand 508
Mining in Nova Scotia..... 471
Mining Stock Market, New York, 1894. 56
Mining Stock Quotations..... 49
Mining Stock Quotations: Aspen, Baltimore, Boston, Colorado Springs, Denver, Duluth, London, Mexico, Montana, New York, Paris, Philadelphia, Pittsburg, Salt Lake, San Francisco, Santiago, Shanghai, Weekly
Mining Tax, Mexico..... 529
Mining Tool, Pat..... 202
Minnesota Geological Survey..... 147
Minnesota Gold Mg. and Refining Co., Minn. 37
Minnesota Iron Co., Minn...61, 86, 110, 184, 301, 421, 446, 470, 493, 566, 588
Minnesota Iron Ore Shipments..... 446
Minnesota Mining Royalties 112
Mint, New South Wales, Gold Receipts. 211
Minnesota Sandstone Co., Minn..... 158
Mint, British, Coinage..... 619
Mint, California Gold at..... 227
Mint Coinage, France..... ....165, 621
Mint, Peru..... 403
Mint, Philadelphia..... ....307, 450
Mint, San Francisco. 450
Mint of the U. S..... 409
Mint Coinage, France..... 165
Mint, U. S., Coinage.....129, 235, 330
Mint Report, U. S..... 123
Minthorn Emery Works, N. Y..... 371
Missouri Furnace Co., Mo. 107, 587
Mo., Kansas & Texas R. R..... 493
Missouri Lead & Zinc Mines..... 206
Missouri Mining Club bulletin..... 123
Mitchel, Jonas L., Tunneling Machine. Pat. 418
Mitchell, David, Fuel Gas Burner, Pat. 202
Mitchell Mine, Colo 157
Mitchell Ranch Syndicate, Colo..... 85
Mix, Turner, Zinc Mining in Arkansas 123
Mobile Coal Co., Mobile..... 467
Model Engine Construction..... 123
Modoc Gold Mg. Co., Colo..... 445
Modoc Mine, Colo. 942
Modoc Mining Co., Colo..... 325, 423
Moebius Patent Metal Separation ... 58
Moebius, R., Removing of Precipitated Silver, Pat 370
Mogollon District Mines, N. Mex..... 422
Moldenhauer's Pat. Precipitating Precious Metals from Solutions.... 58
Mollie Gibson, Colo..... 195
Mollie Gibson Consolidated Mining and Milling Co., Col 36, 45, 195, 202, 253, 285, 340, 349, 357, 381, 405, 4 9, 453, 477, 501, 525, 549, 573, 597, 621
Mollie Gibson Mine, Colo. Div..... 285
Mollie Kathleen Mine, Colo..... 396
Monarch Gas Engine Co., Cal.... 12
Monarch Gold Mg. Co., S. Dak..141, 165, 230
Monarch Iron Claim, Wash..... 63
Monastery Diamond Mine..... 298
Monazite, North Carolina..... 293
*Monel's Process, Obtaining Chlorine 31
Monetary Conference, New International.....169, 187, 210, 212, 307, 522
Monetary Systems of the World, 387, 434
Monkey Hill Mg. Co., Mo..... 517
Mono Mine, Cal..... 252
Mono Mg. Co., Cal.....108, 132, 156, 420
Monometallic League, London..... 498
Monongahela Coal Mines, Pa..... 87
Monongahela River R. R. Co., W. Va. 491
Monongahela Tin Plate Co., Pa..... 419
Monroe's Pat. Brick Kiln..... 34
Montana Coal and Coke Co., Mont., 134, 278
Montana Loan and Investment Co., Mont.. 301
Montana Mg. Co., Mont., 21, 37, 86, 102, 182, 195, 206 278, 285, 296, 309 357, 374, 381, 405, 422, 429, 453, 470, 477, 501, 525, 549, 573, 590, 597, 621
Montana Mine, Ari..... 156
Montana Mineral Lands Commission. 537
Montana, Mining near Helena 26
Montana Mining Stock Quotations, Weekly
Mont. Mg. and Reduction Co., Mont.. 110
Montana Ore Purchasing Co 253, 285, 357, 381, 599, 405, 429, 453, 477, 501, 4 5, 549, 573, 597, 621
Montana Ore Purchasing Co., Mont., Div..... 285
Montana School of Mines..... 263
Montana Society Civil Engineers..135, 179, 203, 275, 395, 467
Montauk Coal Mines, W. Va..... 135
Montauk Iron Co., N. Y..... 204
Monte Negras Hills Mines, Cal..... 300
Montecito Mg. Co., Cal..... 405, 477
Montezuma Mine, Colo..... 516
Montezuma Mg. Co., So. Dak ... 614
Montgomerie, John C., Gold and Silver Extraction Proc., Pat..... 202
Montgomery's Pat. Concentrator..... 11
Montreal Mining and Smelting Co., Utah..... 279
Moissan, Henri, Preparation and Properties of Titanium..... 247
Money in U. S. 67, 138, 258, 330, 354, 450, 570
Money Question, Study of.....98, 122
Moorhead Bro. & Co., Pa..... 251
Moorhead, McCleane Company, Pa. 251
Moorhead Mill..... 467
Moore, Gideon E..... 371
Moore, Jas. H., Air Compressor Pump, Pat 226
Moore Mine, Colo..... 157
Moore, W., Slag Conveyor, Pat..... 370
Moore's Pat. Hoisting Bucket..... 34
Moose Mine, Colo 181, 252
Moose Mg. Co., Colo..... 60, 164
More Creek Mine, Idaho..... 182
Morgan, Edmund G., Electric Mining Machine Pat. 323
Morgan Mining Co., Cal..... 405
Morgan, Robt. R..... 395
Morgan, Thos. R., Steam Hammer, Pat. 466
Morgan's Pat. Slate Dressing and Sizing Machine..... 586
Morning and Evening Star Mines, Colo.... 421
Morning Glory Mine, Arizona 204
Morning Mine, Idaho..... 25, 27
Morning Star, Cal 195
Morning Star Drift Mg. Co., Cal. 102, 405, 429, 453, 477, 501, 515, 525, 549, 573, 597, 621
Morning Star Mg. Co., Cal., 252, 285, 357, 381,
Moses, Alfred J., *Mineralogy, Crystallography and Blow Pipe Analysis*..... 387
Morris Coal Co., O..... 159
Morris, H. D., & Co..... 587
Morrison Shaft, Colo..... 445
Morse, Jay C..... 299
Mortensen's Pat. Pump..... 34
Moscow Mica Mine, Idaho..... 182
Mosher, Chas. D..... 563
Motive Powers and their Practical Selection..... 387
Moulders' Strike, O 419
Mt. George Mg. Co., Cal..... 597, 621
Mt. Jackson Quicksilver Mine..... 468
Mt. Lyall Mg. Co., Tasmania..... 87
Mt. Rose Mg. Co., Colo..... ....381, 405
Mt. Tunnell Gravel, Cal.....597, 621
Mt. Pleasant Mg. Co., N. J..... 183
Mt. Rosa Mine, Colo. Div..... 285
Mt. Rosa Mg. Co., Colo., 93, 102, 195, 357, 429, 453, 477, 501, 525, 549, 573, 597, 621
Mt. Vernon, O., Furnace 491
Mt. Waldo Granite Quarry, Me..... 158
Mt. Wilson District, Colo..... 36
Mountain Chief Mine, Ariz..... 395
Mountain Chief Mine, Ore..... 183
Mountain Iron Co., Minn.. 61, 206, 373, 446
Mountain Iron Mine, Minn ... 517, 589
Mountain Lion and Ohio Mines, Cal.. 108
Mountain Monarch Mine, S. Dak., 254, 279
Mountain Queen Mine, Idaho..... 542
Mountain Ram Mine, Mont..... 543
Mountain Spring District, Cal..... 156
Mountain View Mine, Cal..... 108
Monutain & Lion Mine, Cal..... 541
Midget Mine, Cal..... 589
Muffle Furnace Furbinger's Pat., 35, 514
Muhleman, Maurice L., *Monetary Systems of the World*..... 434
Mulholland's Bromo-Cyanide Process.... 531
Mulholland, C. A., Bromo-Cyanide Process Gold Extraction... 510
Mumma's Pat. Concentrator 539
Munday, J., Tin Mining in Queensland..... 556
Munroe, Daniel A. Pat..... 226
Murchie Mg. Co., Cal..... 420
Muriate of Soda, Prices ....Weekly
Murray Iron Works Co., Ia..... 179
Muspratt, E. K., Alloy Pat..... 202
Muspratt, E. K., Cyanides, Process of Manufacturing, Pat 202
Mystery Wonder Mine, Colo..... 301

N

Nacoochee Hills Mg. Co., Ga..... 613
Nancy Hanks Mine, Colo. 445
Napa Con. Quicksilver Mg. Co., Cal. 102, 195, 260, 285, 357, 381, 405, 429, 453, 477, 516, 525, 549, 573, 597, 621
Narod Mine, Colo..... 469
Narragansett Electric Lighting Co., R. I. 179
Nason, Frank L..... 443
Nason, Frank L., Goler Gold Diggings 223
Nason, Henry B..... 83
Nassau Electric Co., N. Y..... 251
Nathaniel Taylor Coal Co., Pa..... 159
National Bank Reports 282, 378, 546
National Belle, Cal..... 492
National Furnace Co., Wis..... 107
National Lead Co....69, 93, 165, 189, 204, 477
National Lead Co. Report..... 177
National Mine, Mich. 277
National Nickel Co., Nev..... 301
National Tube Works Co., Pa..... 447
Natural Bridge District, Mont..... 134
Natural Gas, N. Y..... 304
Navarre's Pat. Cement Calcining..... 34
Neal, H. W., Hydrogen Gas Machine. 346
Nebraska Gold Mg. Co., Cal..... 132
Negligence in Enjoining Discontinuance..... 293
Negligence, Evidence of..... 418
Negligence, Fellow Servants'. 105
Negligence of Employees..... 248, 393
Negligence of Superintendent..... 465
Negro Creek District Mines, Wash.... 184
Negro Creek Nickel and Copper Mg. Co., Wash 15
Neiderauer Ranch, Wash..... 591
Nellie Mine, Idaho..... 357
Nellie V. Mine, Colo..... 615
Nelson, O. J..... 40
Nelson Tunnel Co., Colo 228
Neodasha Mine, Cal..... 492
Nernst, D., & Borchers, W., *Jahrbuch der Electrochemie* 555
Nesbit, W. M..... 12
Nettie Morgan Mine, Colo..... 252
Neuhausen Co., Switzerland.....97, 117
Nevada County Electric Co., Cal..... 573
Nevada Gold Belts..... 532
Nevada Tunnel Mine, Cal..... 542
Nevadaville Mine, Colo..... 565
Never Sweat Mine, Mont..... 182
Newark Con. Mg. Co., N. J 181
New Basil Con. Mg. Co., Cal.... 597, 621
New Castle Seamless Steel Tubing Co., Pa..... 563
New Castle, Pa., New Steel Plant ... 540
New Castle, Pa., Strike..... 419
New Castle Wire Nail Co., Pa..... 419
New Castle Labor Trouble, Pa..... 395
New Denver District, B. C 111
New Discovery Gold Mine, N. C..... 351
New England Brownstone Co., Con.. 277
New England Iron Co., Minn..... 542
New Eureka Mg. Co., Cal..... 261
New Glasgow Coal, Iron and Ry. Co., N. S 35
New Gold Hill Mg. Co., N. C.....69, 597
Newhouse Tunnel, Colo..... 588
New Iberia, Louisiana Rock Salt..... 301
New Idria Quicksilver Mines, Cal.. 541
New Jersey Central R. R..... 15, 357
New Jersey Exploring & Mg. Co..... 601
N. J. Geological Survey *Rept. on Water Supply*..... 387
New Jersey Geological Survey Report..... 147
New Jersey Iron Mg Co., N. J..... 477
New Jersey Iron Ore Shipments..... 470
New Jersey Zinc & Iron Co..... 601
New Kleinfontein Mg. Co., Transvaal, S. Afr..... 472
*New Mexico, Cooney Mining District..... 343
New Mexico Copper Ore Shipments.. 470
New Mexico & Arizona Smelting Co., N. M..... 135
New Moon Mine, Colo..... 60
New Party Mine, Nev..... 422
New Philadelphia Iron and Steel Co., O..... 107
Newport Colliery, Pa..... 159
New Primrose Mg. Co, Transvaal, 40, 213
New Sampler Mine, Mont..... 566
New Shafts, Colo..... 445
New South Wales, Chromite Mining. 603
New South Wales Mint..... 211
New State Mine, Utah..... 543
Newton County Mines, Mo..... 374
Newton, John..... 419
Newton Mine, Colo. 516
New York Anthracite Coal Market.. 3
New York Bank Statement.....Weekly
New York Belting & Packing Co. 587
New York & Brit. Guiana Gold Mining Co., British Guiana..... 255
New York Canals, Electricity on 106
New York & Cleveland Gas Coal Co., Pa.....87, 423, 424, 496
New York Coal Exchange..... 448
New York Coal Market.....Weekly
New York Chemical Market Weekly
New York Gold and Silver Exports and Imports..... Weekly
New York Iron Market.....Weekly
New York Iron Trade, 1894..... 4
New York & Last Chance Mg. Co., Colo..... 612
New York Metal Exchange 331
New York Metal Market, 1894..... 5
New York Metal Market .....Weekly
New York Mining Stock Market, 1894..... 56
New York Mining Stock Market. Weekly
New York Mining Stock Quotations, Weekly
New York Railroad Club, Meeting, 179, 275
New York Rapid Transit 147
New York Smelting Co., Colo..... 133
New York State Atlas 602
New York State Bankers' Ass'n..... 546
New York State Banks..... 258
New York State Canals.....43, 209
New York Sub-Treasury..... 19
New York Tunnel, Colo 228
New Zealand, Auriferous Deposits... 292
New Zealand, Mineral Production.... 30
New Zealand Mines..... 447
New Zealand, Mining..... 508
New Zealand, Submarine Works..... 105
Niagara Falls Hydraulic Power & Mfg. Co..... 587
Niagara Furnace, N. Y..... 179
Niagara Mg. Co., Utah 446, 471
Nicaragua Canal Commission .. 442
Nicaragua Canal Election 439
Nichols, Frank B..... 395
Nichols, Ralph 131, 155, 275
Nichols, Suter Tunnel Co..... 520
Nicholls, Thomas D., Copper Refining, Pat 202
Nicholos, J., Gold Extraction from Ores, Pat..... 418
Nicholson File Co., R. I..... 108
Nicholson, Frank 611
Nickel Market in 1894..... 7
Nickel, Prices..... ....Weekly
Nickel, Refining Process of, Pat..... 418
Nickel, Societe de..... 405
Nickel Steel..... 294
Nickel-Steel Patents, Validity..... 485
Nickeliferous Pyrites, Gibb's Pat 490
Nicoll, Chas. H., *Monetary Systems of the World*..... 387
Nicolls, Wm. J., Coal..... 203
Night Hawk & Nightingale Mines, Colo..... 157
Nisi Prius Properties, Colo..... 469
Nitrate Beds of Marico, S. Africa.... 346
Nitrate Industry, Chile..... 255
Nitrates, Egypt 81
Nitrate Market, Chile.....404, 572
Nitrate Output, Limiting..... 134
Nitrate Properties, Chile..... 495
Nitrate of Soda, Chile..... 452
Nitrate of Soda, Prices..... ....Weekly
Nitrate of Soda, Statistics.....Monthly
Nitrous Oxide, Action of Ore Metals, etc 394
Nitze, H. B. C 587
Nitze, H. B. C., North Carolina, Monazite 293
Nixon Red Slate Quarrying Co., N. Y. 213
Noad, I. H., Litharge, Process of Manufacture, Pat..... 370
Noble, Alfred..... 347
Noble Five Mt. Mine, B. C..... 255
Noble Group Mines, Cal..... 204
Nordlinger, Max..... 226
Norfolk & Western R. R. Co., W. Va. 124, 518
Norfolk & Western R. R. Co., Report 484
Norman Gold Mg. Co., Colo..... 133
Norman Mine, Minn..... 470
North American Canal Co..... 88
North Carolina, Early Ironmaking... 559
North Carolina Mines..... 183
North, Edward P..... 299
North Banner Con. Mg. Co., Cal., 71, 95, 405, 429, 453, 477, 501, 525
North Fork Gravel Mg. Co., Cal..... 132
North Gould & Curry Mg. Co., Nev... 23
North Homestake Mg. Co., N. M..... 351
North Lebanon, Pa., Furnaces..... ... 611
North Pole Mine, Oregon..... 422
North Pole Mine, Wash..... ... 15
North San Juan Mg. Co., Cal., 405, 429, 453, 477, 501
North Star Mine, Colo..... 277, 301
North Star Mg. Co., Cal..... 204, 429
North Thompson County, B. C..... 519
Northern Mg. Co., Colo., 109, 396, 516, 542
Northern Pacific R. R..... 324
Northfield Slate Co., Utah..... 279
Northwestern Iron Co., Wis..... 591
Norton Iron Works, Ky..... 107
Norton Tin Plate Wks., Md..... 419
Norwalk Iron Works, Conn..... 347
Norwalk Tramway Co., Conn..... 563
Norway Mine, Utah..... 614
Nottingham Coal & Iron Co., Ala.... 179
Nova Scotia Coal..... 16, 40
Nova Scotia Mines..... 303
Now or Never Mine, Colo 325, 445
Noyes, Albert F..... 203
Nugget Gold Mining, N. C..... 590
Nugget Mg. Co., Colo ...195. 205, 252, 285, 349, 357, 381, 405, 429, 453, 477, 501, 525, 549, 573, 597, 621
No. 1 Mine, B. C..... 303
Nystrom's Pocketbook of Mechanics and Engineering..... 435, 554

O

Oak Grove Mine, Cal ... 541
Oakland Mine, New Mex ... 590
Ocean Wave Mine, Colo. ..276, 396, 445, 615, 252
Occidental Con. Mg. Co., Nev ..14, 62, 86, 110, 206, 253, 278, 302, 309, 333, 357, 381, 405, 422, 429, 453, 470, 477, 494, 501, 525, 549, 567, 573, 597
Occidental Mine, Cal ... 468, 612
Octorara Mine, Nev ... 613
Odin Mine, Cal ... 332, 372
Ogden, Chas. Walton ... 563
Ogden Furnace & Mfg. Co. ... 587
Ogden Iron Works, Utah ... 35
Ohio Coal Combination ... 280
Ohio Coal Mines ... 543, 567
Ohio Coal Traffic Ass'n, Ohio ... 254, 279
Ohio-Colorado Mg. Co., Colo ... 469
Ohio Institute, Mining Engineers ... 35
Ohio Iron Company, Minn ... 470
Ohio Iron & Steel Co., Ohio ... 227
Ohio & Kentucky R. R. Ky ... 589
Ohio Mine, Minn ... 613
Ohio Oil Co., Ohio ... 590
Ohio Oil Co., W. Va ... 327
Ohio River & Lake Erie Ship Canal ... 239
Ohio Steel Company, Ohio ... 107 451, 515
Ohio Society Surveyors and Civil Engineers ... 83
Oil City Tube Co., Pa ... 549
Oil Combine, Scotch-American ... 202
Oil, Elizabeth, W. Va ... 303
Oil Exports ... 60
Oil Fields, Wyo ... 398
Oils, Fire Test, Vaporizing, Pat ... 394
Oil, Gasifying Hydrocarbon, Pat ... 250
Oil & Gas Lease ... 297
Oil Lease, surrender of ... 274
Oil Market, Shanghai, China ... 65, 89, 137
Oil Well Machinery, Rigby's Pat ... 58
Oil, Price of ... 385
Oil prices, Rising in Wyo ... 423
Oil Producers' Meeting, Pa ... 160
Oil Producers' and Refiners' Independent Ass'n ... 88
Oil Purification by Sulphurous Acid ... 539
Oil Purifying, Mills' Pat ... 82
Oil Sand, Wyo ... 351
Oil, Shale, Improvements in Distilling, Pat ... 370
Oil & Water Gas, Mfg. of, Pat ... 346
Oil Well Packer, Pat ... 242
O. K. Mine, Colo ... 373
Oklahoma Territory ... 614
Okonite Co., N. Y ... 35
Olcott, E. E ... 107
Oliver Mining Co., Minn ... 350
Old Abe Mg. Co., N. M ... 110, 253, 357
Old Charlie Mine, So. Dak ... 591
Old Dominion Copper Co., Ariz., 515, 567, 611
Old Glory Mine, Ariz ... 156
Old Jordan Mine, Utah ... 494
Old Jordan & Galena Mg. Co., Utah, 303, 591
Old Keystone Mine, Cal ... 13
Old Martin Mine, Cal ... 204
Olga Mine, Colo ... 589
Oligny, Jean D., Artificial Fuel, Pat ... 418
Olive Branch Mine, Mont ... 14
Oliver, T. T., Electrolytic separation in molten bath, Pat ... 202
Oliver, James E., N. Y ... 299
Oliver Company, Pa ... 563
Oliver Iron Mg. Co., Minn. ..37, 86, 158, 373, 397, 470
Oliver Wire Company ... 419
Olszewski, Charles, Liquefaction of Gases ... 318
Omaha & Grant Smelting Co ... 135
Omeis Slate Quarry, Minn ... 158
Oneida Colliery, Pa ... 289
Oneida Mg. Co., Cal ... 381
O'Neill, Henry G., Crucible, Pat ... 442
Ontario-Daly Electric Plant, Utah ... 231
Ontario Gold Districts ... 231
Ontario Mines ... 303
Ontario, Lake of the Woods District ... 152
Ontario, Mineral Production of ..313, 315
Ontario Mg. Co., Utah ..15, 39, 207, 231, 254, 327, 398, 417, 494, 518, 614
Ontario Mine Wash ... 15
Ontario & Rainy River R. R., Minn ... 470
Ooregum Gold Mg. Co., India ... 447
Opal Fields of New South Wales ... 437
Ophir Mine, Mont ... 517
Ophir Mg. Co. Nev ... 14, 23, 38, 39, 47, 62, 71, 86, 95, 119, 159, 183, 253, 381, 429, 405, 453, 470, 477, 501, 543, 588
Opie, John ... 131
Opohonga Mine, Utah ... 279
*Ore Bodies, Sampling and Examination of ... 196, 221
Ore Bodies, Sampling and Measurement ... 196, 241, 247
Ores, Concentrator, Pat ... 502
Ore Concentrating Apparatus, Pat ... 394
Ore Crusher and Pulverizer Pat ... 274
Ore Crusher and Amalgamator, Pat ... 226
Ore Crushing, Pat ... 442
*Ore Deposits, Cripple Creek, Colo ... 151
Ore Deposits, Genesis of ... 531
Ore Deposits, Superficial Alteration of ... 338, 341
Ore Deposits, Xenogenous, Sub-classification of ... 268
Ore Rates, Lake ... 449
Ore Roasting Furnace, Pat ... 370
Ore Separator, Magnetic, Pat ... 442
Ore Shipments, Minn ... 373
Ore, Shipments, Marquette, Mich ... 373
Ore Smelting, Electrically, Pat ... 370
Ore Sweep, Pike's Pat ... 58
Ore Tramway, Pat ... 418
Ore Treatment by the Cyanide Process direct ... 389
Ore Treatment in the Cooney Mining Dist., N. M ... 388
Ore Treating, Christmas' Pat ... 539
Ore Washer, Pike's Pat ... 58
Ore Washer & Concentrator, Dana's Pat ... 586
Ore Washing, Monteponi, Sardinia ... 199
Oregon & California Mg. Co., Cal ... 227
Oregon Improvement Co., Report ... 296
Oregon Gold Mg. Co., Ore ... 39
Orford, H., *Lines Work for Amateurs* 460, 554
Original Empire Hill Mg. Co., Cal ... 429
Orleans Mg. Co., Cal ... 156, 564
Oro Mg. Co., Ariz ... 108
Oro Fino Mine, Colo ... 541
Oro Fino Mg. Co., Mont ... 206, 229
Oro Grande Mine, Cal ... 468
Orpha May Mine, Colo ... 205, 445, 520
Orphan Bell Mine, Colo ... 85
Orphan Boy Mine, Colo ... 276
Orr & Lembower, Pa ... 347
Osborn Hill Mg. Co., Cal ..237, 285, 309, 333, 357, 381, 597, 621
Osborne, Leader Smelter, Colo ... 391
Osburn Mining District, Idaho ... 229
Osceola Mg. Co., Ga ... 565
Osceola Mg. Co., Mich ..102, 158, 195, 237, 255, 268, 277, 285, 301, 357, 381, 405, 429, 453, 477, 501, 525, 549, 566, 573, 589, 597, 621
Osceola Phoshate Co., Fla ... 253
Otego Mining Co., Colo ... 252
Otis Elevator Co., N. Y ... 83
Otis, Philip A ... 107
Otis Steel Co., Ohio ... 449, 587
Ottaqueechy Gold Mg. Co., Vt ... 111, 327
Otto-Hoffman Coke Plant, Pa ... 324
Ouray Smelter, Colo ... 516
Ouro Preto Gold Mining Co., Brazil, 15, 255 447
Overflowing Lands, Liability for ... 418
Overman Mg. Co., Nev ..23, 405, 429, 453, 477, 501, 525, 549
Owens Brownstone Quarry, Va ... 279
Owings Furnace, Ashland, Ky ... 65
Owner of Water-Power, Rights and Duties ... 57
Owyhee County Mines, Idaho ... 445
Oxford Furnace, N. J ... 179
Oxygen Gas, Process of Mfg ... 243
Oxford Iron and Nail Co ... 201, 275, 395
Oxides, Producing, Crossley's Pat ... 11
Ozone, Price of ... 202

P

Pacific Coast Oil Co., Cal ... 165
Pacific Coast Technical Society ... 35
Pacific Extension Mine, New Mex ... 230
Pacific Gold Co., New Mex ... 230
Pacific Mine, New Mex ... 302
Pacific Mg. Co., Cal ... 69
Pacific Mining Co., Nev., 167, 191, 213, 237, 285, 326, 422
Pacific Stock Exchange, Cal ... 69
Pa-liz Stone Quarry, O ... 159
Palmarejo Mg. Co., Mex ... 93
Palmer, Chas. O., Mining Machine, Pat ... 226
Palmetto Group, Ari ... 108
Pamlico Mine, Nev ... 61
Pampa Central Copper Mines, Argentina ... 555
Pandora Mine, Colo ... 492
Panhandle Mine, Colo ... 133
Panning Concentrator Improvement, Hammond & Gordon's Pat ... 586
Panulcello Mines, Chile ... 615
Paragon Mg. Co., Colo ... 132
Pardee, Frank, Settling Tank ... 442
Paris Mining Stock Markets ... Weekly
Paris Mining Stock Quotations ... Weekly
Paris, New Securities ... 69
Park City Mills, Utah ... 447
Park County Gold Districts, Mont ... 134
Park Iron and Steel Co., Ind ... 107
Park Regent Mg. Co., Colo ... 325, 62
Park & Lacey Co., Cal ... 275
Parker, Richard A ... 35, 467
Parker, Harry W., Hydrocarbon Burner, Pat ... 250
Parker Gold Mine, N. C ... 422, 590
Parker Iron Mine, Ga ... 493
Parole Mining Co., Cal 119, 143, 167, 191, 213, 237
Parrot Mg. Co., Mont ... 11, 38
Parry Sound, Ont ... 519
Parsons, Chas. Lathrop, *Mineralogy, Crystallography and Blow Pipe Analysis* ... 387
Partially Decarburizing Cast Iron—Huffaye & Caldwell's Pat ... 610
Partz, August F. W., Pat ... 250
Patents, Rept. of Commissioner ... 218
Patent Assignment ... 82, 582
Patent Claims, Limitation ... 25
Patent, Intrigement of, Damages for ... 274
Patent Infringement, Damages ... 129
Patent Infringement, Tests ... 82
Patent Machinery, Patterns ... 582
Patents on Machinery ... 393
Patent Office, British ... 561
Patent Ruling, New ... 442
Patent, Statute of Limitations ... 105
Patents, Taxation of, Legal Decision ... 344
Patented Article, Prior use of, Legal Decision ... 441
Patent for Improvement in Degree Not Valid ... 82
Patentable Improvements Legal Decisions ... 441
Patentable Invention ... 508
Patentable Inventions, Legal Decision ... 441
Patents, Inventions Patentable and Unpatentable ... 466
Paschal Copper Co., N. Mex ... 470
Pass Mining Co., Idaho ... 229
Patterson, William, Coal etc., Cutting Machine, Pat ... 202
Paving Stones, Tyrlt's Pat ... 58
Pawnolas Mines, Colo ... 252
Paxton Rolling Mills, Pa ... 131
Payette Group Mine, Idaho ... 542
Payne, Joseph L., Gold Separator, Pat ... 370
Peabody's Australian Lime ... 491
Peabody Gold Mg. Co. Meeting, Cal ... 357
Peace River Phosphate Mg. Co., Fla ... 37
Peat Briquettes, Stauber's Pat ... 11
Peckhardt, G., Coal Drying, Pat ... 178
Pederson, Andrew, Tuyere Iron, Pat ... 323
Peele, Prof Robert ... 611
Pietszch, B., Making of Alkaline Sulphides, Pat ... 418
Pelatan & Clerice's Pat. Gold Obtaining ... 490
Pelatan's Pat. Roasting Sulphuric Ores ... 610
Pelton Water Wheel Co ... 419
Pelzer Mfg. Co., S. C ... 132
Pendergast, Rozer ... 189
Penetration of Rifle Bullets in Snow ... 249
Peninsular Phosphate Co., Fla ... 253
Penn Iron & Coal Co., Ohio ... 251
Penn Iron Co., Minn ... 470
Penn Anthracite Coal Co., Pa ... 62
Pennsylvania, Auditor-General's Report ... 147
Pennsylvania Bolt and Nut Wks., Pa ... 179, 419, 587
Pennsylvania Co., Pa ... 541
Pennsylvania Coal Co., Pa., 213, 302, 397, 525
Pennsylvania Iron Co., Minn ... 373
Pennsylvania Mine, Colo., 189, 300, 396, 421
Pennsylvania Oil Co., Wyo, 53, 111, 254, 398, 567
Pennsylvania Railroad Co ... 213, 429, 515
Pennsylvania, Railroad Map ... 531
Pennsylvania R.R, Steel Rail Orders ... 41
Pennsylvania Salt Mfg. Co., Pa ... 251, 309
Pennsylvania Slate Co., Pa ... 159
Pennsylvania Smelter Co., Utah ..416, 543
Pennsylvania State College ... 467
Pennsylvania Steel Co., Pa., 59, 89, 107, 131, 275, 321, 352, 376, 419, 515, 540, 563
Penrose, R. A. F., Jr., The Superficial Alteration of Ore Deposits ... 338
Penrose, R. A. F., Jr., Superficial Alteration of Ore Deposits ... 341
Penrose Mine, Colo ... 181
Peat Fuel, Dickson ... 37
Perak, Gold Mine ... 295
Perry, Arthur, Rolling Mill Pat ... 370
Percy Mine, Colo ... 516
Pony Express Mine, Col ... 542
Perry Stove Co., N. Y ... 588
Perkins, W., Variations on Cyanide Process, Pat ... 370
Persia, Copper Ores ... 82
Peru, Mint ... 403
Peru, Proposed R. R ... 304
Peter's Pat. Artificial Stone ... 490
Peters, E. D., Jr., Elimination of Impurities from Copper ... 512
Peters, E. D., Jr., Iodide Assay for Copper ... 124
Peteler's Pat. Dump Car ... 34
Peter Mg Co., Utah ... 494
Petroleum, American, in Denmark ... 561
Petroleum Market, Weekly from April 20
Petroleum Market, Weekly from June 1
Petroleum Market ... 572
Petroleum Situation ... 362
Petroleum Supply of the Caucasus ... 250
Petroleum, Vaporizing, Penchen's Pat ... 11
Petroleum, Wyoming ... 254
Penchen's Pat. Vaporizing Petroleum ... 11
Pewabic Mg. Co., Mich ... 182
Pharmacist Mg. Co., Colo., 109, 205, 495, 564
Philadelphia Engineers' Club ..59, 107, 155
Philadelphia Engineers' Club ..203, 324, 371, 419, 467, 515, 563, 611
Philadelphia Gold and Copper Co., Ore ... 351
Philadelphia Iron Market ... Weekly
Philadelphia Iron Trade, 1894 ... 4
Philadelphia Mine, Cal ... 204
Philadelphia Mint ... 426
Philadelphia Stock Quotations ... Weekly
Philadelphia & Reading Co., Pa., 1, 16, 53, 62, 112
Philadelphia & Reading Co., 305, 424, 521, 616
Philadelphia & Reading Coal Co., Pa. 227
Philadelphia & Reading Coal and Iron Co., Pa ... 518
Philadelphia & Reading Coal Storage Plants ... 605
Phillips, Wm. B., Chemist and the Blast Furnace ... 537
Phillips Mt. Quarry, N. C ... 159
Phœnix Mine, Br. Colo ... 447
Phœnix Claim, Colo ... 615
Phœnix Mine, Ore ... 422
Phœnix Mg. Co., Utah ..525, 549, 573, 597, 621
*Phonolite Dikes, Cripple Creek, Colo ... 583
Phosphate Agreement, Proposed ... 492
Phosphates, Algeria ... 583
Phosphates, Charleston, S. C ... 500
Phosphate Companies, Fla ... 445, 469
Phosphate Concessions, Tunis ... 237
Phosphate Development and Finance Co, Fla ... 253
Phosphates, Etude Complete sur les ... 290
Phosphate King Mine, Que ... 40
Phosphate Market, Charleston, S. C ... 44
Phosphate Miners, Fla ... 25
Phosphate Rock ... Weekly
Phosphate Rock, Fla ... 253
Phosphate Shipments, Charleston ... 382
Phosphate Shipments, Fla, 61, 85, 277, 565
Phosphate Shipments from Florida and Georgia ... 205
Phosphates of Tenn ... 294
Phosphor-Bronze Smelting Co, Ltd ... 457
Phosphoric Acid Making, Van Ruybeke's Pat ... 539
Phosphorus, Prices ... Weekly
Photo-Etching, New Process ... 57
Pittsburg & Belle Vernon Coal Co., Pa ... 87
Pittsburg Coal District, Pa ... 87
Pittsburg Coal Market ... Weekly
Pittsburg Coal Mines, Pa ... 135, 136
Pittsburg Coal Miners, Pa ... 518
Pittsburg Gold Mines, Nev ... 453
Pittsburg Iron and Steel Sales and Prices ... Weekly
Pittsburg Iron Co., Minn ... 86
Pittsburg Iron Market ... Weekly
Pittsburg Iron Sales and Prices ... 161
Pittsburg Iron Trade, 1894 ... 8
Pittsburg Oil Wells, New ... 518
Pittsburg Plate Glass Co., Pa ... 348
Pittsburg Railroad Coal Operators, Pa ... 302
Pittsburg Reduction Co., Pa., 131, 251, 419, 515, 587
Pittsburg Tin Plate Co., Pa ... 419
Pittsburg Stock Quotations ... Weekly
Pittsburg & Tennessee Copper Co., Tenn ... 491
Pittsburg & Wheeling Coal Co., W. Va ... 279
Picacho Basin Mines, Cal ... 420
Pickands, Mathew & Co., O ... 136
Pickling Iron or Steel, Rawson's Pat ... 58
Pigeon Mine, Colo ... 85
Piedmont Mine, Ga ... 565
Piedmont Soapstone Co., Va ... 614
Pierce & Miller Eng. Co ... 444
Pierce, Walter S., Calciuming Machines Pat ... 202
Pike's Pat. Hydraulic Sluice Bearers. 490
Pike's Pat. O e Washer and Sweeper 58
Pike's Peak Mine, Colo ... 157, 181, 205
Pilgrim Mine, Colo ... 396
Pilot Bay Concentrator, B. C ... 255
Pine Creek District, Colo ... 565
Pine Hill Mg. Co., Cal ..381, 405, 429, 453, 477
Pine Hill Mg. Co., Cal ... 501, 525, 549
Pine Nut District Mines, Nev ... 182
Pinkney's Pat. Mfg. of Gas ... 562
Pioneer Mine, Cal ... 13
Pioneer Mine, Colo ... 469
Pioneer Mg. & Mfg. Co., Ga ... 563
Pioneer Iron Co., Minn., 61, 182, 373, 446, 470, 493, 566, 613
Pioneer Mine, Transvaal ... 519
*Pipe Joints, Tight ... 22
Pipe Works Co., Chicago, Ohio ... 227
Placer Mining in Colorado ... 468
Placer Mining, Ore ... 374
Placer Mining, Harper's Pat ... 490
Placer Mining Rights, Legal Decision 393
Placer Mining Separator, Cuplin's Pat ... 58
Placer Patent, Legal Decision ... 393
Plant Investment Co., Fla ... 181
Plate Glass Combination ... 371
Plating Aluminum, Pat ... 298
Platinum Phosphate, Formation ... 533
Platinum, Prices ... Weekly
Pless, Wm. P., Dredging Apparatus, Pat ... 226
Plotts, William, Oil or Water Well Boiler, Pat ... 202
Plumbago Crucibles, How to Use 134
Plum Creek Coal Mines, Pa ... 616
Plummer, John, Gold of Australasia. 199
Plummer, John, Mining in New Zealand ... 508
Plutus Mine, Cal ... 542
Plymouth Rock Mine, Colo ... 495
Pocahontas Coal Co., W. Va ..136, 327, 328
Pocahontas Coal Region, Va ... 423
Pochuck Quarry, N. J ... 86
Poetsch Method of Sinking Shafts ... 171
Poison, Metallic, Electrolytic Determination ... 129
Poland, Coal ... 130
Polaric Mine, Idaho ... 397
Polk County, Iowa, Coal Supplies ... 149
Poloen Pregones Mg. Co., Mex ... 63
Ponce de Leon Mine, Cal ... 420
Pontiac Mg. Co., Colo ... 13, 228, 253
Pony Express Mine, Colo ... 373
Poorman Con. Mg. Co., Idaho, 117, 134, 145, 157, 165, 189, 193, 218, 357, 525, 591
Porter, Edward D ... 85
Porter, Samuel, Ingot Pusher, Pat ... 346
Porphyry ... 578
Port Henry Iron Ore Co., N. Y ... 141
Portland Cement ... 578
Portland Cement Tests, Michele's ... 32
Portland Gold Mg. Co., Colo., Report. 150
Portland Gold Mg. Co., Colo ... 165
Portland Group Mines, Colo ... 445
Portland Mining Co., Colo., 195, 205, 285, 357, 381, 396, 405, 429, 453, 477
Portland Mg. Co., Colo., 501, 525, 549, 573, 597, 621
Portland No. 2 Mine, Colo ... 615
Port Oram Furnace, N. J ... 179
Portugal, Finances ... 453
Posey Underwood Syndicate, Utah ... 471
*Posepny, Franz ... 391
Posepny, F., Genesis of Ore Deposits ... 531
Post, Benjamin M ... 587
Postage, Foreign ... 433
Postage Stamp, International ... 105, 267
Postal Union, International ... 580
Potassium Cyanide Making, Crowther, Rossiter & Albright's Pat ... 610
Potassium Cyanide, Mackey's Pat ... 490
Potato Gulch Mines, S. Dak ... 327
Potosi Mine, Ga ... 493
Poto-i Mg. Co., Mont., 429, 453, 477, 501, 517
Potosi Mg. Co., Nev., 14, 23, 39, 47, 62, 71, 95, 119, 183, 206, 253, 278, 350, 374, 397, 494, 543, 567, 590
Potter, Edward C ... 40
Potter, John A., Pat ... 202
Potter, John A., Casting Steel Pat. 274
Potts, John, Suit Against Penna. Salt Mfg. Co ... 251
Pottstown Iron Co., Pa ... 189, 324, 491
Poughkeepsie Furnace, N. Y ... 275
Poulterer & Co., Pa ... 371, 589
Power, Artificial Stone, Pat ... 298
Power Hammer, Pat ... 226
Power Hammer, Boynton's Pat ... 539
Powell, Wm & Co ... 611
Powers, M. L ... 17
Powder, Action of Smokeless, on Rifles ... 461
Practicien Industriel, Paris ... 393
Pratt, Francis A. Coal Loader, Pat ... 226

Pratt Mines, Ala. 515
Preacher Mine, Ga. 109, 445
Precautions Against Danger. Legal Decisions. 465
Precious Metals, Precipitating from Solutions, Moldenhauer's Pat 58
Precious Metals, Production Since 1492. 198
Precious Stones, Recovery of from their Ores. Pat. 370
Premises, Condition of. 561
Preparing Alkaline Cyanides, Castner's, Pat. 586
President's Message 138
Price, Giles D 155
Prices, Benner's Prophecies on. 98
Prices, *Benner's Prophesies*. 290
Prices, Current, Chemicals and Minerals. Weekly
Prices, Increase of. 377
Pride of Aspen Mine, Colo. 228, 349
Prieska Nitrate Fields, S. Africa. 87
Priest, H. M., Pa 275
Priestone, Saml. L., Oxidizing Furnace, Pat. 226
Primrose Colliery, Pa. 302
Prince Albert Mine, Ari. 12, 588
Prince, Jerome. Grinding and Crushing Machine, Pat. 202
Princess Mg. Co., Cal. 564
Prince Mfg. Co., N. Y 324
Pritschdali Coal and Coke Co., Pa. 41
Prizes, Societe Technique, France. 10
Process of Removing Piles of Coal, Pat. 394
Production in form of Crystalline, Calcium, Carbide, Willson's Pat. 610
Producing Ill. Gas, Young & Bell's Pat. 562
Projectiles, Manufacture. 589
Promissory Note, Failure of Consideration 57
Propping Roof, Liability for Failure. 33
Prospector's Handbook. 531
Providence Mine, Cal. 180
Prussia, Coal. 534
Prussia, Lining Shafts. 150
Prussia, R. R. Councils. 178
Prussia, Taxes on Stock Sales. 213
Prussian Mine, Colo. 276
Puddling Direct from the Blast Furnace 394
Pueblo Smelting & Refining Co., Colo. 40, 325, 397
Pulaski Iron Co., Va. 83
Pullman Company, Ill. 419
Pulsometer Steam Pump Co., N. Y. 419
Pulverizing Apparatus, Pat. 294
Pulverizer, McLauthlin's Pat. 58
Pulverizing Mill, Pat 298
Pulverizing and Mixing Apparatus, Elliott's Pat. 514
Pulverizer for Ore. Pat. 418
Pulverizing Rock, Machine for, Pat. 323
Pump, Air. Pat. 250
Pumps, Automatic Hyd. Pat. 226
Pump or Blower, Rumley's Pat. 82
Pump, Centrifugal, Seitz & Park's Pat. 34
Pumping by Compressed Air. 314
*Pump, Double Acting Cornish Plunger. 295
*Pump, Electric, for Mines. 297
Pump, Gas Well, Klein's Pat. 11
Pump, Hall's Pat. 11
Putnam Mg. Co., Utah. 111
Pump, Mortensen's Pat 34
*Pumping Plant, Electric. 560
Pumps, Power, Gould Mfg. Co. 440
Pumping Station, Electric. 322
Punjom Mg. Co., India. 447
Purchase of Mining Interest. Legal Decision. 465
Pyne, Percy Rivington 179
Pyramid Mg. Co., N. Mex. 470
Pyrites, Kernel Roasting. 147
Pyritous Concentrates, Cyanide Treatment. 559
Pyrmont Quarries, New So. Wales. 494
Pyrometer, Pneumatic 290
*Pyrometer, Uehling's Pneumatic. 249

Q

*Quarrying Machinery, Improvements in. 416
Quarrymen's Strike, Conn. 301
Quartz Mt. Mine, Cal. 541
Quebec, Report on Crown Lands. 98
Quebrada Copper Mg. Co., Venezuela 261
Queensland, Tin Mining. 556
Quesnelle Quartz Mg. Co., B. C. 16
Quicksilver, California. 68, 84
Quicksilver Mines, Almaden, Spain 130
Quicksilver Mg. Co., Cal. 60, 372, 447
*Quicksilver Mining, Guadalcazar, Mex. 607
Quicksilver, Prices Weekly
Quincy Granite Mfg. Assn., Mass. 277
Quincy Granite Cutters' Union, Mass. 277
Quincy Mg. Co., Mich. 61, 64, 69, 131, 158, 195, 253, 277, 285, 357, 381, 405, 429, 446, 453, 469, 477, 501, 517, 525, 542, 549, 573, 597, 613, 621
Quincy Mg. Co., Mich., Report 150
Quincy Mg. & Water Co., Cal. 372, 541
Quinlan, W. D. 69

R

Raber, Nathan L., Amalgamator. 346
Rachel Mine, Ore. 374
Rachielle's Pat. Stone Drill. 34
Radford Pipe & Foundry Co., O. 275
Railroad and Coal Companies, West Virginia. 121
Railroad Coal Operators' Ass'n, Pa. 62
Railroad Contracts, Decision 490
Railroad Councils of Prussia. 178
Railroads, Venezuela. 130
Rails, Basic and Bessemer Steel. 113
Rails, Steel, in France. 285
Railway Construction, Rapid. 393
Rain, Energy in. 52
Rainy Lake Gold District, Minn. 61, 110, 147, 158, 206, 213, 253, 277, 351, 373, 422, 493, 589, 613
Rainbow Mg. Co, S. Dak. 143, 167, 191, 213, 237
Raleigh, C., Stamp Mill Screen Clearer. Pat. 250
Ramage, H., Protective Coating for Aluminum. Pat. 270
Ramsay's Pat Coal Washer. 106
Ramsey's, Hugh, Dredging Steamers 468
Rand Drill Co., N. Y. 179, 467
*Rand Drill Co., Channeling Machine 534
Randolph Co. Mines, N. C. 590
Rand & Indicator Mines, B. C. 303
Rankine's Civil Engineering, Notes on. 314
Rarus Mine, Mont. 182
Rates, Rail, Decision on Interstate. 441
Rattler Mine, Colo. 157, 396
Rattling Jack Mine, Colo. 61
Raven Mine, Colo. 85, 205, 349, 396, 445, 589
Ravenswood Gold Field, West. Aus. 519
Rawhide Mine, Cal. 84, 109, 520, 519, 612
Rawlins Mg. & Smeltg. Co., Wyo 471
Rawson's Pat. Pickling Iron and Steel 58
*Raymond, R. W., Moritz Ferdinand Gaetzschmann. 415
Raymond, R. W., Eckley B. Coxe. 463
Reading Iron Works, Pa. 540
Reading and Lehigh Valley Coal War 232
Reading Negotiations. 399, 448
Reading Rolling Mill Co., Pa. 59, 107
Readman's Pat. Cyanide Making. 31
Recovering Gold from Streams, Whaler's Pat. 514
Recovery for Accidents. 393
Reck, Frank C 107
Red Ash Mine, Pa. 423
Red Bird Coal Mine, Pa. 87
Red Buttes Gypsum Depo-its, Wyo. 591
Red Canon Coal Mine, Wyo. 327, 447
Red Cliff District Mines, Colo 373, 420
Red Cloud Mine, Cal. 84
Red Cloud Mg. Co., Idaho. 445
Red Dog Mine, Ore. 283
Red Hill Placer Mine, Cal. 204
Red Jacket Con. Mg. Co, Nev., 381, 405, 429, 453, 477, 501, 525
Red Line Mg. Co., Mont. 525
Red Mountain Railway, B. C. 111, 393
Red Mountain Mining District, Colo. 301
Red Rover Mine, Cal. 180
Reed Gold Mine, N. C. 374
Reed Mine, N. C. 590
Reed, Philetus C., Blast Furnace, Pat. 202
Refractory Substances, New. 581
Refining Iron, Lencauchez's Pat. 586
Refining Zinc Spelter, Jenes' Pat. 586
Regent Mine, Colo. 396, 421, 516
Reid Iron Bank, Nev. 14
Reimer Gold Mine, N. C. 471, 590
Reinhardt, Herman 107
Reiwitch, Herman L., Combustion of Coal, Pat. 418
Reliance Colliery, Pa. 111
Republic Iron Works, Pa 107
Rent, Collection of, Defective Title no Defence. 344
Rent under Oil Lease. 440
Renwick, James. 611
Renwick, Henry Brevoort. 107
Resena Industrial e Historica de la Minera y Metalurjica de Chile. 435
Resurrection Mine, Colo. 325
Revenue Gold Mg. Co., Colo. 372, 373
Revenue Gold Mine, Mont. 229
Reverberatory Furnace, Brick Bottomed, in Copper Smelting 263
Revista de Marina, Chile. 567
Reward Gold Mg. Co., Cal., 405, 429, 453, 477, 501, 541
Rex Mine, Colo., 85, 109, 228, 277, 300, 349, 373, 445, 516, 568, 612
Reynolds Brothers' Tin Mfg. Co., Md. 107
Rhodes & Kloz's Pat. Air Cut-off for Furnaces 82
Rialto Mg. Co., Colo. 141
Ricard & Freiwald 419
Richards, Francis H., Furnace, Pat. 323
*Richards, Frank, Economy in Air Compression 269
Richards, Frank, Compressed Air for Pumping 314
Richards, Francis H., Burning Fuel, Pat. 274
Richards, Francis H., Locomotive Engine, Pat. 274
Richards' Pat. Miners' Safety Oil Lamps. 586
Richards, Prof. Robert H. 540
Richardson's Pat. Coal Separator. 58
Richardson Colliery, Pa. 39
Richardson's Pat. Making Pure Pig Iron. 490
Richardson, Charles G., Refining Process of Nickel, Pat. 418
Richard's Pat. Blast Furnace Top 82
Richmond Gold Mine, Wyo. 494
Richmond Iron Co., Mass. 35
Richmond Tunnel, Colo. 84
Rickard, T. A., Colorado. 231
Rickard, T. A., Gold Fields of Western Australia. 15
Rickard, T. A, Mining at Bendigo. 29
Rickard, T. A., Philosophy of Stamp Milling. 243
Rickard, T. A., Porphyry. 578
Rickard, T. A., Silver and Tin. 27
Rickard, T. A. The Flouring and Sickening of Mercury. 460
Rico-Aspen Con. Mg. Co., Colo., 85, 109, 596
Rico, Colo., New Smelter. 231
Ridge Mill, Colo. 325
Rigby's Pat. Oil Well Machinery. 58
Rinsdale, C. H., Solubility of Basic Slag. 197
Rinder's Pat. Separating Gold and Silver. 610
Rio Grande Branch Line, Colo. 492
Rio Tinto Company, Spain. 390, 399, 621
Ripsey Camp, Ari. 132
Risdon Iron Works, Cal. 83
Risher Coal Co., Pa 64
Risk, Assumption by Employe. 33, 248, 274
Rising Sun Mine, Cal. 549
Riter & Conley, Pa. 419, 563
Rittenhouse Gap Ore Mines, Pa. 423
Riverside Iron Co. 131, 371, 467
Roanoke Iron Co., Va 251
Roasting Carbonate Iron Ores. 442
Roasting Furnace, Pat. 226
Roasting Furnace. See "Furnace"
Roanoke Iron Co., Va. 60, 107
Roasting, Kernel. 104, 147
Roasting Ores, Pat 418
Robb, Thomas B. 395
Roberts, A. & P. Co., Pa. 137
Robinson, G. H. 491
Roberts' Pat. Utilizing Cinder 106
Robbins Coal Mine, Pa. 87
Robbins-Elkhorn Mine, Ore. 135, 230
Robinson & Plumb's Pat. Crusher and Amalgamator 154
Robinson's Pat. Gas Engine 58
Robinson, J. H. 520
Robson & Crowder's Pat. Extracting Fine Gold and Sulphurets. 490
Rockland Lime Co., Me. 14
Rock Crusher, Pat. 370
*Rock Cutter, Kidwell's. 513
Rock Drill. See "Drill"
Rock Drills, Feed for, Koch's Pat. 490
Rock Drill Pat. 250
Rock Drills, Rotating devices, Ingersoll-Sargeant's Pat. 610
Rockefeller-Merritt Suits. 493
Rockefeller Mg. Suit, Minn. 567
Rock Springs Coal Mines, Wyo. 184
Rock Springs Coal Co., Wyo. 21, 567
Rockwell, Walter S., Apparatus for Handling Oil for Fuel, Pat. 394
Rocky Hill Stone Storage Co., N. J. 278
Rocky Mt. Coal and Iron Co., Wyo. 280
Rocky River Gold Mine, N. C. 374, 590
Rodda-Camborne's Pat. Improved Distributor. 610
Roden Quarry, Wis. 303
Rodosena Mine, Cal. 204
Rogers, Brown & Merrin, Ill. 16
Rogers Mine, Cal 348
Roland, Joseph, Mining Machine, Pat. 346
Rollers for Compressing Electro-Deposited Metals, Pat. 370
Rolling Mill, Pat 370
Rome-Colton Tie Co., Ga. 540
Roucheleau-Ray Iron Co., Minn. 158
Roof, Failure to Prop. 81
Rope and Belt Transmission, Power Lost in 394
Ropes of Diminishing Section for Winding. 178
Rope, Flattened Strand Wire. 440
Ropp's Pat. Roasting Furnace. 34
Rose & Byron Oil Property, Pa. 351
Rose Hill Mine, Cal. 276
Rose Mine, Cal. 612
Rosena Furnace Foundations, Pa 395
Rosena Furnace Explosion Doors. 419
Ross, J. E., Glasgow, Percussive Rock Drill Pat. 250
Ross, G. McM., Kernel Roasting 340
Ross, J., Minerals of Brazil. 125
Ross' Pat. Cylindrical Vessel for Spraying Water. 610
Rossland District, B. C. 111
Rothwell, R. P., *World Currencies.* 115
Rotating Pulverizers, McKellar's Pat. 586
Rotten Hole Mine, Colo 564
Rough and Ready Mine, Cal. 204
Roux, M. A. J., Separation of Argentiferous Lead from Blende, Pat. 370
Royal Coal & Coke Co., Tenn. 398
Royalty Contract. 582
Royal Gold Mg. Co, Mont. 513
Royal Mining Co., Mont. 350
Rubies, Artificial 323
Ruby Mine, Colo. 252, 396, 495, 615
Rumley's Pat, Pump or Blower. 82
*Rundall, W. H., Quicksilver Mining, Guadalcazar, Mex. 607
Russell, T. H., Amalgamation and the Russell Process 99
Russell Process and Amalgamation at Blue Bird Mill. 99
Russia, Budget. 91
Russia, Coal Trade. 101
Russia, Coal Mining. 367
Russia, French Syndicate. 69
Russia, Gold Coins 595
Russia, Gold Transactions. 379, 427
Russia, Geodetic Surveys of. 298
Russia, Iron Production. 82
Ruthenium, Coloring from. 33
Rust, Protection of Iron and Sheet Against. 393
Rusting of Metal Structures. 562
Rutter, Thos. 443
Ryan & McDonald, Md. 156
Ryanna Mine, Mont. 158
Ryons Quarry, Ore. 159

S

Saarbach, Dr. L. 419
Sacramento Mine, Colo. 85
Sacramento and American River Placers, Cal. 541
Safety Lamp, Pat. 323
Safety Suspension Apparatus, Stuart's Pat. 610
St. Auburn, William T 347
St. Catherine Mine, N. C. 590
St. Charles Furnace, Pa. 371
St. Clair Iron Co., Minn. 373, 517
St. George Mg. Co., Ga. 493, 542, 612
St. Joe & Mineral Farm Con. Mg. Co., Colo. 13
St. John Del Rey Mg. Co., Brazil 15, 255
St. John Mine, Colo. 565
St. John Mg. Co., Cal. 23, 47, 71
St. Joseph Lead Co. 472
St. Louis County Board, Improvement of Road. 542
St. Louis Engineers' Club. 35, 83, 155, 275, 299, 347, 395, 443, 491, 611
St. Louis Mine, Colo 37
St. Louis & Cripple Creek Tunnel Co., Colo. 520
St. Mary's Canal Mineral Land Co., Mich. 213
St. Paul Civil Engineers' Society. 59, 155
Sal Mt. Asbestos Co., Ga. 157
Sale, Contract of, Interpretation of. 344
Sale of Machinery, Conditional. 273
Sale of Mining Co. 441
Salt Lake City Mining Stock Market, Weekly
Salt Lake City Mining Stock Quotations. Weekly
Salt Creek Oil Field, Wyo 255
Salt Duties, Italy. 307
Salt Lake Copper Mfg. Co., Utah, 15, 254, 543
Salt Lake Ore and Bullion Shipments, Utah. Weekly
Salt Lake Smelter, Utah. 87
Salt, New Iberia, La. 201
Salton Mines, Cal 300
Sambo Mine, Colo. 37
*Sample Grinder. 465
*Sampling of Ore Bodies. 221, 247
San Bernardino Mine, Cal. 542
San Carlos Coalfields, Texas. 558
San Francisco, Gold and Silver Movement. 66
San Francisco Mint, Coinage. 43, 354
San Francisco & San Joaquin Coal Co., Cal. 227
San Francisco Specie Exports, 139, 258, 354, 402, 474, 594
San Francisco Specie Imports, 43, 212, 307, 546
San Francisco Stock Market. Weekly
San Francisco Stock Quotations. Weekly
San Francisco Stock Exchange Sales, 45, 69, 93, 141, 237
San Juan Chief Mines, Cal. 516, 542
San Juan Smelting and Mining Co., Colo 277
San Juan & Standard Smelters, Colo. 300
San Luis Potosi Mine, Mex. 6, 15
San Mateo Mine, Chile. 615
San Miguel Con. Mg. Co., Colo. 85
San Rafael y Anexas, Mexico 255
Sanders, Frank 491
Sanford, Richard K. 395
Saniter Process, Desulphurizing Iron, 579
Santa Creek Gold Mg. Co. 564
Santa Fe Copper Co., New Mex. 494
Santa Fe Mine, Cal. 180
Santa Fe, Prescott & Phoenix R. R., Arizona 252
Santa Rita Mine, Cal. 276
Santa Rita Mine, Colo. 615
Santa Rosa Mine, Cal. 180, 325, 588
Santa Ynez Working, Cal. 541
Santa Ysabel Gold Mg. Co., Cal. 541
Santiago, Chili, Mining Exposition. 174
Sanitary Mine, Minn. 566
Santy Creek Gold Finds, Ala. 541
Saturday Night Mine, Mont. 110
Sault Ste. Marie Canal. 64, 568
Savage Mg. Co., Nev., 14, 23, 47, 62, 71, 88, 95, 101, 135, 159, 183, 206, 278, 302, 326, 350, 374, 429, 453, 471, 477, 494, 501, 525, 549, 567
Sayre, Marcus, Limekiln, Pat. 226
Scaife & Sons, Wm. B., Pa. 515
Sceets, Geo. N., Mixing Molten Metals, Pat. 226
Schaefer-Heinemann Accumulator, 148, 195
Scheidel, A. 587
Schierholz, August H., Ore Crusher. 466
Schuman's Pat. Gold Separator and Amalgamator. 514
Schmeisser, Bergrath, *Uber Verkommen der Nutzbaren Mineralien in der Transvaal.* 51
Schmidt, C. F. 587
Schneider, E. A., Selective Action of Potassium Cyanide. 171
Schmitz, Albert, Mfg. of Armor Plates, Pat. 226
Schmitz's Pat. Apparatus for Mixing Coal Dust. 539
Schneider Carburizing Process. 154
Schneider, E. A., Chlorination or Cyaniding 461
Schoen Mfg. Co. 467
School of Mines, Mont. 203
Scorpion Mg. Co., Nev 494
Schwahn, Heinrich F. D., Roasting Ores, Pat. 418
Scientific Lectures. 98, 363
Scott Island Mine. 301
Scott, W. L., Coal Co., Pa. 254
Scorpion Mg. Co. Meeting. 453
Scotch Lass Mine, N. Mex. 422
*Scotch Pig Iron, Manufacture. 536
Scoville, Eugene M., Brass Crucible Furnace, Pat. 202
Sea Level, Changes of 123
Seaman, Prof. W. H. 12
Secretary's Manual. 123, 243
Section Thirty-three, Mich. 517
Securities, Issues in London. 43
Sedalia Mine, Colo. 133
Seek-no-Further Quarry, Pa. 15
Segregated Belcher Mg. Co., Nev., 62, 110, 191, 213, 237, 278, 285, 309, 326, 350, 374, 397, 422, 471, 567, 590
Segregated Belcher & Midas Con. Mg. Co., Cal. 525
Segregated West. Con. Cal. & Va. Mg. Co., Nev 350
Seifert's Rolling Mill, Pa. 540
Seine Bay Land Co., Minn. 301
Seine River Gold Claims, Ont. 16
Seitz & Park's Pat. Centrifugal Pump 34
Selwyn, Dr. A. R. C., Canada. 203
Sellers Iron Mine, Minn. 86
Sellers Mine, Minn. 613
Sellers Ore Co., Minn. 184

Seminoe Mg. District, Wyo..... 471
Senator Mine, Ariz..... 541
Seneca Mine, Colo..... 612
Separating Gold and Silver. Pinder's Pat..... 610
Separating Metallic Potassium and Sodium. Vautin's Pat..... 490
Separator for Minerals, Pat..... 226
Separator, Magnetic, Arden's Pat.... 82
Separator, Magnetic, Buchanan's Pat. 11
Sergent Co., Ill..... 59
Servant, Duty of Master to..... 82
Settling Tank, Pat..... 442
Seven Stars Mining Co., Ariz..... 276
*Sexton, A. H., Lead Smelting in Scotland..... 175
*Sexton, A. H., Manufacture of Scotch Pig..... 536
Shaft Sinking by Congelation..... 171
Shafter Mine, Colo..... 588
Shafts, Lining, in Prussia..... 150
Shakespeare Mine, Cal..... 585
Shaler, N. S., *Changes of Sea Level*... 123
Shaler & Hall Quarry Co., Conn..... 277
Shanghai, China, Coal Market..65, 89, 137, 185, 281, 400, 448, 592
Shanghai Mining Stock Quotations, Weekly
Shanner Mine No. 2, Pa 374
Sharon Iron Co., Pa.....107, 611
Sharp Zinc Mines, Mo..... 38
Sharpe, Richard..... 395
Sharpless, Frederick F 327
Sharpsville Furnaces, Pa..... 131
Shaw, W. T..... 443
Sheet Iron and Steel Manufacturers' Ass'n..... 59
Sheffield Coal, Iron and Steel Co., Ala..... 564
Shenango Furnace Co., Pa..... 540
Shenango Valley Steel Mill, Pa..... 227
Shepard, Alexander S 563
Shepard Mg. Co., Utah 327
Shepherd, Robert C., Water Motor, Pat..... 346
Sheridan Con., Mg. and Milling Co., Colo 85, 517
Sheridan Furnaces, Pa..... 563
Sheridan Mine, Minn..... 350
Sheridan Mine, N. M..... 135
Sheriff Mine, Colo.....157, 396, 615
Sherman Granite Quarries, Wyo..... 63
Sherman's Pat. Hoist and Transfer.. 514
Shields, Chas. O, Colo 299
Shipping, British, in 1891..... 274
Shipments of Ore and Bullion, Salt Lake City, Utah..... 254
Short Stop and El Paso Mines, Colo.. 109
Shooting by Employes..... 465
Shrewsbury, Chas. P., Carbon for Electrical Purposes. Pat..... 442
Shinner's Pat. Gas Producer..... 562
"Sickening" and "Flouring" of Mercury..... 460
Sierra Nevada Mine, Idaho 397
Siam, New Railroad 321
Siemens-Martin Furnace, Improvements 606
Sierra Buttes Mg. Co., Cal.....60, 227
Sierra Nevada Mine, Idaho..... 613
Sierra Nevada Mg. Co., Nev.., 15, 86, 92, 95, 110, 119, 143, 167, 183, 191, 206, 213, 237, 278, 543, 567, 590
*Signal, Electric, for Miners..... 33
Silesia, Blast Furnace Construction.. 579
Silesia Mineral Industry..... 483
Silicon in Cast Iron..... 458
Silver Age, Colo..... 300
Silver and Gold Extraction Process, Pat 202
Silver and Gold in the Cupel..... 123
Silver and Gold Production of the World 577, 602
Silver and Gold, U. S..... 533
Silver Bow Basin Mines, Alaska..... 252
Silver Cell Mine, N. M..... 135
Silver in Congress..... 187
Silver Cloud Mine, Utah..... 614
Silver Conference, New..... 193
Silver Conference..... 618
Silver Conference, Salt Lake..... 354
Silver Convention at Memphis..... 546
Silver Crown Mine, Wyo 591
Silver Exports and Imports .....Weekly
Silver Exports, Mexico..... 67
Silver, Free Coinage of 409
Silver Hill Mg. Co., Nev.....23, 24, 494
Silver Hill Mine, Mont..... 517
Silver in Politics..... 618
Silver King and Blue Dick Mines, Idaho 133
Silver King Mg. Co., Ariz..... ....300, 429
Silver King Mine, B. C..... 447
Silver King Mg. Co., Cal..... 180
Silver King Mg. Co., Utah, 525, 549, 573, 597, 621
Silver Law of 1857..... 162
Silver, Mexican Tales..... 486
Silver Mines at Broken Hill, N. S. W. 410
Silver Mines, Idaho, Sale 145
Silver Mines of Thunder Bay..... 391
Silver Mining and Smelting in China. 316
Silver Movement, France 21, 117, 141
Silver Movement, Great Britain..91, 187
Silver, Movement of in Kernel Roasting 411
Silver Movement, San Francisco..... 66
Silver Peak Mine, Nev..... 350
Silver Pick Mine, Colo.....109, 301
Silver Plume Mine, S. Dak..... 279
Silver, Precipitated, Removing of, Pat 370
Silver, Prices.....266, 361, 433, 457
Silver, Prices.....Weekly
Silver, Prices, India.. 283
Silver Production, U. S..... 73
Silver Receipts, U. S. Assay Office, New York.....Weekly
Silver, Recovery from Solutions, Pat. 442
Silver Shipments to the East .Weekly
Silver Shipments, San Francisco. 139
Silver Spar Mg. & Milling Co., Utah. 477
Silver Speculation.....337, 426
Silver Spur & Millersburg Mine, Colo..... 565
Silver Standard Group, Colo..... 37
Silver Star District Mines, Nev..... 422
Silver, U. S 482
Silver, Utah Production..... 183
Silver and Tin 27
Silverton, Colo., Electric Plant..... 580
Silverton, Colo., Water Power..... 205
Simison's Pat. Placer Mg. Machine.. 490
Simpson, Chas 591
Simmons, J. Edward..... 491
Sims, A. W..... 491
Sintz Gas Engine Co., Mich..... 59
Sioux Mg. Co., Utah 15
Siskiyou Con. Mg. Co., Cal.,23, 47, 71, 598
Siskiyou Gold Development Co., Cal.. 36
Sisterville Oil Field, W. Va..... 614
Sivyer Mine, Cal..... 542
Sixth Street Mine, Colo..... 568
Sixth Street Shaft, Colo..... 492
Skagit-Cumberland Coal Co., Wash.. 237
*Skewes, E., Cripple Creek, Ore. Deposits 103, 151
*Skewes, E., Cripple Creek Phonolite Dikes..... 583
Skinner's Mining Manual, 1895..... 531
Skinner, W. R., *Mining Manual* 483
Sky Rocket Mine, Colo 516
Slag, Basic, for Fertilizers..... 418
Slag, Basic, Solubility of..... 197
Slag, Blast Furnace, Cement from.... 505
Slag Conveyor, Pat..... 370
Slag, Blast Furnace, Magnesia and Sulphur in..... 363
Slag, Blast Furnace, Sulphur and Magnesia in 52, 75
Slag, Blast Furnace, Utilizing..... 2
Slag, Phosphatic, Mfr. of, Pat..... 370
Slate Dressing and Sizing Machine, Morgan's Pat..... 586
Slate Engraving and Mfg. Co., Me... 157
Slatington-Bangor Slate Syndicate, Pa..... 63
Slaty Cleavage in Cellulose..... 466
Slide Mine, Colo 85, 228, 542
Slide Mining Property, Colo 205
Sligo Iron and Pipe Mill, Pa..... 595
Slimes, Precipitation of, Pat..... 370
Slimes, Treatment..... 106
Slocan Star Mine, Br. Col..... 447
Sloss Iron and Steel Co., Pa.....395, 587
Small Hopes Mine, Colo.....565, 589
Smelters' Association, Colo..... 218
Smelting Ores, Process, Pat 466
Smelting in Southwestern Colorado.. 585
Smoke Purifier, Bergquist's Pat..... 82
Smokeless Powder, Action of, on Rifles..... 461
Smith, A. G..... 165
Smith Brothers Quarry, Maine..... 277
Smith, E. A., *Geological Map of Alabama*..... 98
Smith, Frank Clemes..... 540
Smith, John B.....59, 64
Smith Mine, Ga 14
Smith-Moffat Properties, Colo.181, 373, 589
Smith Scale Co., Tenn 540
Smith & Co., Francis, Cal..... 275
Smuggler Mg. Co. Colo....37, 102, 157, 195, 285, 301, 349, 357, 373 381, 396, 405, 429, 453, 477, 501, 525, 549, 565, 573, 597, 621
Smuggler-Union Mg. Co., Colo....109, 229, 253, 415
Snowball Mine, Nev..... 422
Snowbird Mine, Idaho..... 542
Snowshoe Mine, Mont..... 350
Snowy Range Mine, Colo..... 615
Sodium Peroxide in Analysis..... 544
Sodium, Prices .....Weekly
Solder for Aluminum, Pat..... 274
Solomon Mine, Colo..... 300
Solvay Process Co., N. Y..... 563
Solvent for Gold, Atkin's Pat..... 499
Sonnemann, Geo. A 540
Soudan Mines, Minn..... 469
Soudan Mine, Mont 14
Soulsby Mine, Cal..... 612
Sound Money Meeting, Philadelphia. 522
Sound Waves, Experiments on..... 346
South Africa, Cost of Mining.....529, 535
South Africa, Gold.....75, 98
South Africa, Gold and Coal..... 226
South Africa, Rise of..... 555
South African Mines.....207, 208
South America, Mining 189
South Dakota Mining Co., S. Dak 279
South Dakota School of Mines..... 443
South Dover Marble Co., N. Y.....194, 613
South Engineering Ass'n.....83, 155
South Eureka Mg. Co., Cal., 23, 47, 95, 119, 143, 167, 191, 2 3, 237, 357, 381, 405, 429, 453, 477, 501, 525, 541, 549, 573, 597, 621
South Idaho Mine, Cal..... 13
South Mt. Electric R. R. Co., Md ... 108
South Side Foundry and Machine Works..... 444
South Spring Hill & Medelan Mine, Cal 13
Southern Mine Owners' Meeting..... 533
Southern Sound Money Convention, 378, 426
Southern & Southwestern Railway Club Meeting..... 107, 347, 491
Southwest Penn. Oil Co., Pa..... 63
Spain, Almaden Quicksilver Mines... 130
Spain, Aramo Mine..... 130
Spain, Bids for Steel Rails..... 281
Spain, Imports and Exports..327, 392, 465, 562
Spain, Iron Ore Market....138, 330, 425, 522
Spain, Lead Market..... ....44, 235, 331, 427
Spain, Mineral Exports..... 112
Spain, Railroad Crisis..... 93
Spanish Hole Placer Mine, Cal..... 252
Spanish Mine, Cal 180, 541
Spanish Stamp Mill, Cal. 325
Sparks, J. Noel, Cyanide Process.... 388
Spathic Iron Co., Ala 324
Spathite Furnace, Ala..... 515
Spearman Furnace, Pa 491, 563
Spearman Iron Co., Pa. 107, 251
Special Session, Colo..... 565
Spelter Market..... ...Weekly
Spelter Market in 1894..... 7
Sperry, Francis L. Nickel & Nickel Steel 294
Sperry Currency Bill..... 1
Spiegeleisen and Ferro-Manganese Prices .....Weekly
Spot Cash Mine, Colo...13, 85, 109, 205, 469
Spotted Horse Mine, Mont..... 518
Sprague, Timothy W 540
*Sprague, T. W., Electric Haulage at Berwind-White Colliery 598
*Sprague, Timothy W., Telephone Communication Underground. ... 439
Spring City Mine, Mo..... 374
Spring Creek Placers, Wyo..... 25
Springfield's Shafts Strike 397
Spring, George S., Combustion of Coal. Pat 418
Spring Gulch Mines, Colo 325
Spring Valley Hydraulic Mg. Co., Cal..... 396
Spring Valley Land & Mg. Co., Mo.. 374
Spring Valley Gold Mining Co., Cal.. 348
Spy Mining Co., Utah..... 327
Stamp Head Attachment, Close's Pat..... 490
Stamp Mill, Burson's Pat..... 58
Stamp Mill, Dry Crushing in..... 392
Stamp Mill, Pat 466
Stamp Mill Screen Clearer. Pat..... 250
Stamp Milling, Philosophy of..... 243
Stamp Sand in Cement Mortar..... 173
Stauber's Pat. Peat Briquette Machine 11
Standard Air Brake Co., N. Y..... 374
Standard Coal Co., Ariz..... 132
Standard Coal Mine, Pa..... 471
Standard Con. Mg. Co.,Cal..21, 92, 161, 189, 201, 357, 381, 405, 429, 453, 477, 501, 520, 525, 549, 573, 597, 621
Standard Mines, Idaho..... 205
Standard Mg. Co., Idaho..... 157
Standard Oil Co 71, 83, 131, 395, 428
Standard Underground Cable Co., Pa 108
Standard & Minnehaha Mine, Colo . 228
Standard vs. Bodie Mg. Co., Cal . 541
Stanford Mine, Cal..... 180
Stanley Mine, Ga 86
Stannard, Harry Laurie, Obituary... 250
Stanton's Pat. Stone Crusher..... 490
Star Group Mine, Cal 564
Star Mine, Idaho, ... 182, 517
Stars Mines, Colo 373, 516
Star County Mines, Strike at Ohio.... 471
Starlight Mg. Co., Cal.36, 237, 285, 309, 333
Starlight Mg. Co., Nev.....23, 47, 71
State Mine, Mont..... 110
Statistics of Exports, U. S. Treasury Dept..... 252
Statute of Limitations, Legal Decisions..... 297
Stead, J. E., Effect of Arsenic on Steel..... .....560, 668
Steam Engine Pat 202, 251
Steam Engine Construction 531
Steam Hammer Pat 455
Steam Pipe, New 539
Steam Power & Mill Work..... 290, 541
Steam Stone Cutter Co., Vt..... 155
Steam Turbine, de Laval's. Pat 58
Steel, Arsenic in..... 608
Steel, soft, in Bessemer Converter.... 274
Steel, Casting. Pat 274
Steel, Condition of Carbon in..... 80
Steel, Constitution of..... 437
Steel, Effect of Arsenic on..... 560
Steel, Estimating Carbon in..... 581
Steel, Hardening of..... 344
Steel Market, Great Britain..... 50
Steel Making, Bertrand & Thail's Pat. 34
Steel, Microscopical Analysis..... 79
Steel Prices .....Weekly
Steel Process, Carnegie..... 194
Steel Process, Walrand..... 34
Steel, Process of Mfg. Pat 466
Steel Production in U. S. in 1891.... 452
Steel Rails for California..... 256
Steel Rail Orders, Pennsylvania R. R. 41
Steel, Structural Specifications..... 99
Steel, Thomas..... 26
Steel, U. S..... 169
Steel and Iron, British vs. American 170
Steel Works, France..... 117
Steel Workers' Ass'n, Homestead, Pa. 59
Steelton Merchant Mills, Pa..... 247
Steinkohlenbergbau in den Vereinigten Staaten von Nord Amerika 290
Stemwinder Mine, B. C 39
Stemwinder Mine, Idaho..... 613
Sterling Coal Mines, Utah..... 135
Sterling Iron and Ry. Co., N. Y 213
Sterling Mg. Co., Cal..... .405, 477
Sterling Gold Mg. Co., Nev.....397, 543
Sterling Steel Works, Pa..... 204
Stevens, Austen, Pulverizing Apparatus, Pat..... 394
Stevenot, E. K., Angels' Camp, Cal.. 507
Stewart Group Mines, Colo.....469, 612
Stewart Mill, Utah..... 494
Stewart Mg. Co..... 39
Stichi, Robert..... 16
Stobie Mine, Ont..... 399
Stock Market, Boston, 1891 9
Stock Quotations, Aspen, Baltimore, Boston, Denver, Colorado Springs, Duluth, London, Mexico, Montana, New York, Paris, Philadelphia, Pittsburg, Salt Lake, San Francisco, Shanghai, Santiago, Weekly
Stock Subscriptions — Representations 582
Stockton Colliery, Pa..... 135
Stokes, A. P., *Joint Metallism*..... 602
Stone Artificial, Pat..... .250, 298
Stone Artificial, Eddy's Pat..... 11
Stone Breaker, Lowry's Pat..... 58
Stone Channeling Machine, Ball's Pat..... 610
Stone Crusher, Bacon's Pat..... 539
Stone Crusher, Stanton's Pat..... ... 490
Stone Cutting Machine, Kouhoupt's Pat..... 539
Stone Grinding Machine, Pat..... 466
Stone Grooving Tool, Dudley & McCuskey's Pat..... 610
Stone Working Tool, Clarke & Walker's Pat 82
Storage Battery..... 224
*Storage Battery Plant..... 224
Storage Structure, Dodge's Pat..... 490
Storms, M. E., W. H., Wall Rocks of Cal. Gold Mines..... 172
Storm and Mails..... 121
Stott's City Mg. Co., Nev 14, 61
Stow Mill, California..... 492
Strike, Brooklyn..... 73
Strikes, France 237
Stroud & Chamberlin Coal Tract, Pa. 62
Struthers Iron & Steel Company, O... 515
Stuart's Pat. Safety Suspension Apparatus..... 610
Stults, Jacob W Pat..... 226
Sub Rosa Mine, Idaho..... 133
Submarine Works, New Zealand.. ... 105
*Sucklin's Dry Stamp Battery..... 392
Sudbury District Mine, Ont.....399, 519
Suez Canal Traffic 466
Suffolk Mine, Colo..... 109, 492
Sullivan Mine, Colo..... 325
Sulman, H. Livingstone, Dissolving, Gold..... 281
Sulman, H. L. Precipitation of Slimes 370
Sulman's Pat. Gold Recovery 35
Sulphides, Alkaline, Making of Pat.. 418
Sulphur and Magnesia in Blast Furnace Slag 52, 75
Sulphur in Blast Furnace Practice 289
Sulphur in Iron, Determination of.. 441
Sulphur Removal, Dobbs' Pat 34
Sulphuric Acid, Apparatus and Process, Pat..... 298
Sulphuric Ores, Roasting, Pelatan's Pat 610
Sultana Mine, Ontario 255
Sulzer-Vogt Machine Co., Ky..... 540
Summit Branch R. R. Co., Pa..... 254
Summit Mine, Colo. 276, 469, 495
Summit Mg. Co., Cal 23, 47, 132
Summit Mg. Co., Idaho 182, 326
Summit Mining & Milling Co., Colo.. 228
Summit, Deer Horn, Colo..... 181
Summerville Mine, Colo..... 516
Sunbury, Pa., Nail Mill Co..... 611
Sunrise Mine, Mont 543
Sunshine Mine, Nev..... 398
Sunshine Mine, Utah..... 207
Sunburst Mine, New Mex 590
Suntry Mine, Minn 301
Sunnyside Mg. Co., Cal..... 381
Sunny South Mine, Cal..... 180
Superior Mine, Colo 516
Suspension Bridge, Theory of 121
Susquehanna Coal Co., Pa., 251, 279, 351, 614
Sutcliffe, G. W., *Steam Power and Mill Work*..... 531
Sutcliffe, George William, *Steam Power and Mill Work* 290
Sutherland, J., Improvement on Amalgamators..... 418
Sutherland, James, Ore Crushers. Pat..... 226
Sutton Coal Co., W. Va..... 159
Sutro, Theodore..... 404
Sutton Marl Pits, Vt 169
Svenson, John A. F., Loading Machine. Pat 202
Swain, Alfred 117
Swan, J. W., Desilverization of Lead by Zinc, Pat..... 274
*Swansea, Late Lord..... 32
Swansea Mine, Utah..... 135
Swanson, Olaf P., Coal Drill, Pat..... 226
Sweden, Loan Conversion..... 139
Sweet Mine, Colo 252
Sweet Mg. Co., Colo 85, 157
Swem, James M., Ore Tramway, Pat. 418
*Switzerland, Electric Plant 128
Sydney, Mint Receipts, N. S. W..... 211
Sydney Technological Museum 487
Sylvester Mine, Ga 157
Sylvan Steel Co., Ill..... 251
Sylvarite Mine, Colo..... 132
Syndicate Gold Payments..... 234
System of Pipes and Hot Air Jets, Heaton's Pat 490

T

Tabor Mines Co., Colo.....181, 516
Tacoma, Wash., Gold Bearing Claims 194
Tacoma Smelting and Refg. Co., Wash..... .....87, 160, 254, 398, 567
Talbot's Pat. Metallurgical Furnaces 562
Tall dega Mts., Mica, Ala..... 491
Tall Pine Mine, N. Mex 422
Tamarack Mining Co., Mich., 109 134, 158, 182, 349, 399, 405, 446, 493, 517, 566
Tamarack, Jr., Mining Co., Mich., 158, 373, 421
Tam O' Shanter Mine, Ont..... 399
Tampa, Florida, Bridge..... 491
Tanner's Pat. Amalgamator..... 58
Tanning Process 344
Tarfield Mine, Colo..... 133
Tariff Law, Date of..... 546
Tariff, Mexico 307
Tarryall Gold Contract Mg. Co., Colo. 181
Tasmania, Bismuth..... ... 519
Tasmania, Gold..... 75
Tasmania, Mineral Experts..... 327
Tasmania, Mineral Resources of 266
Tasmania, Report of the Secretary of Mines..... 267
Tatnam Edwin, Gasifying Oils. Pat.. 250
Tax, Associations Subject to, Legal Decision 441
Taxes on Mining, Mexico 482
Taylor Iron & Steel Co., N. J..... 419
Taylor, H. P., Mg. Co., Cal 429, 453, 477, 501, 525, 549, 573, 597, 621
Taylor, N. & G., Co., Pa 443
Taylor, S., Mfrs. of Crucible Covers. Pat 370
Taylor, S., Solder for Aluminum. Pat 274
Taylor, W. W., Chemist..... 227

Tayntor, C. E., Derrick, Granite Quarry.... 202
Teed, Frank L., Dissolving Gold in Cyanide solutions.... 363
Tehuantepec R. R., Mex.... 540
Telegraphing by Induction.... 586
Telephone Hand-book.... 314
Telephone Patent, Berliner.... 487
*Telephonic Communication Underground.... 439
Tellurium Atomic Weight.... 418
Tellurium in Copper Bullion.... 389
Tellurium Gold and Silver Mine, Cal. 84
Temoclast Mine, Cal.... 444
Temon Mines.... 615
Temperature of Electric Arc.... 58
Tenderfoot Mine, Colo.... 451, 14, 589
Tennessee Coal, Iron & R. R. Co., 131, 200, 204, 237, 329, 348, 461, 509, 587
Tennessee Oil Co., Tenn.... 159
Tennessee Rebel Group of Mines, Utah.... 279
Tennessee, Report on Mines and Labor.... 98
Tenth Lot Mine, Ga.... 493, 542
Teresa Mg. Co, Mex.... 95, 119, 143, 167, 191
Terhune, R. H.... 515
Terrant, William, Concentrator.... 418
Terrestrial Magnetism.... 131
Terrible Mine, Cal.... 492
Test Chlorination Plant, N. C.... 590
Test of Cast Iron.... 290
Testing Cast Iron.... 367
Tetmajer, L., *Uber das Verhalten der Thomes Stahlschienen in Betriebe*.. 26
Tetro Mine, Utah.... 614
Texas, Cinnabar.... 293
Texas, San Carlos Coalfields.... 558
Thacker Land Co., W. Va.... 544
Tharsis Sulphur and Copper Co., Spain, Report.... 399, 462
Theresa Mine, Colo.... 85, 132
Thistle Mine, Cal.... 13
Thomas Iron Co., Pa.... 107, 587
Thomas Furnace, Ala.... 299
Thomas Furnace Co., Ohio.... 443
Thomas, W. H.... 540
Thomas, W. A., Electrolysis, Pat.... 274
Thomas' Pat. Kiln.... 610
Thomas Steel Manufacturers.... 26
Thompson & Gray Quarry Co., Mo.. 158
Thompson Lot, Ga.... 157
Thompson, G. W., Rock Crusher Pat. 370
Thomson, Elihu, Elec. Welding Apparatus, Pat.... 202
Thomson, G., Gold Separation, Pat.. 466
Thomson, Elihu, Means of Operating Drills, Pat.... 250
Thornton, Gov. N. M.... 444
Thunder Bay Silver Mines.... 391
Tidal Wave Mine, Colo.... 396
Tiger Mg. Co., Idaho.. 37, 145, 157, 193, 218
*Tight Joint Co., N. Y.... 32
Timberline Coal Mines, Mont.... 470
Tin.... 27
Tin, Corner in.... 116
Tin Deposits of Durango, Mex.... 293
Tin Exports, Straits.... 163
Tingman, Alb. G., Apparatus for collecting Gold. Pat.... 394
Tin Market, 1894.... 6
Tin Market.... Weekly
Tin Mines, Cornwall.... 58, 501
Tin Mining, Queensland.... 556
Tin Movement.... 20
Tin Plate Mills.... 227
Tin Plate Production, U. S.... 259
Tin Statistics, January.... 140
Tin, Straits Exports.... 169
Tintic Mining District, Utah. 279, 327, 363, 591 327
Tiptop Mine, Cal.... 300
Tip Top Mine, Idaho.... 61
Tip Top Mg., Drainage and Transportation Tunnel Co., Colo.... 445
Titanium, Preparation and Properties of.... 246
Todd, Prof. J. E.... 540
Todd, J. E., *Report on the Geology of South Dakota*.... 555
Tolima Mg Co., Columbia.... 213
Tolman, W. H., *Higher Education in Rhode Island*.... 26
Tolo Placers, Ore.... 513
Tom Boy Mg. Co., Colo.. 169, 301, 421, 492
Tombstone District Mines, Ariz.... 444
Tonawanda Iron and Steel Co.... 467
Tonkin Boiler and Engine Wks, N. Y. 395
Topeka Mine, Colo.... 133
Tornaghi, Angelo, Ore Pulverizer, Pat 418
Toronto Coal Trade.... 161
Torpedo Boat Destroyers, cost of.... 298
Torpedo Boat, New Submarine.... 323
Torrey, H. G., Tests of Dahlonega Gold Ores.... 2
Tortolas Mt. Mine, Chile.... 615
Tough Nut Mine, Idaho.... 566
Trade Dollar Mine, Idaha.... 61
Traders' Mine, Mich.... 517
"Tradesman".... 51
Trade Water Coal Co., Ky.... 86
Trade with Central and So. America.. 433
Trail Creek District, B. C.... 39, 111, 519
Trail Creek Mining District, Colo.. 252, 495
*Tramway, Wire Rope, English Mt., Mine, Cal.... 55
Tramway, Wire Rope, at Gibraltar... 130
Transvaal-Coal Mining.... 461
Transvaal, Gold.... 75, 194, 483
Transvaal Gold Stocks, Pan's Speculation.... 45
Transvaal, Minerals and Metals.... 51
Transvaal Mines, S. Africa.... 304
Transferring Metal from furnaces, Young's Pat.... 514
*Transit, Brunton's Pocket.... 464
Trapdoor, for Mines, Pat.... 370
Trautwein, Chas. A, Pit Furnace, Pat. 250
Trautwine, John C.... 491
Travis Mine, Idaho.... 229
Traylor, Robert W., Mica Grinding, Pat.... 202
Treating Ores, Kennan's Pat.... 562
Trethewey Mfg. Co, Pa.... 540
Trespass in Coal Mining.... 507
Trespass, Damages for Legal Decision.... 249
Trio Gold & Silver Mining Co., Meeting.... 405
Triumph Mfg. Co., Colo. 13, 85, 373, 492, 542, 544, 567
Trueman-Ackerman Mine, Cal.... 420
Trusts in Mining Claims, Legal Decision.... 249
Tucson Mg. & Smelting Co., Ariz.... 444
Tudor Iron Works, Mo., Notes.... 227
Tully, N. & I. R., Cal.... 444
Tunnel, Belt Line R. R.... 441
Tunnel Decisions.... 365
Tunnel Mining Claims.... 582
Tunneling Machine, Pat.... 418, 562
Tungsten, Determination of.... 345
Tungsten, Prices.... Weekly from June 8
Tunis, Commercial Treaties.... 237
Tunis, Phosphate Concessions.... 237
Turkey Creek Mine, Colo.... 421
Turkey, Meerschaum Mining in.... 464
Turkey, Metric System in.... 368
Tuyere Iron, Pat.... 323
Twin Lake Placers, Colo.... 213
Two Harbors Mine, Minn.... 613
Tyler vs. Last Chance Mg. Co., Idaho 86
Typlt's Pat. Paving Stones.... 58
Tyrrell, J. B.... 35

U

*Uehling's Pneumatic Pyrometer. 249, 290
Uehling, Steinbart & Co.... 587
Ulster Newton Mine, Colo.... 277
Underwood, Herbert G., Casting Metals, Pat.... 26
Uniformitarianism and Deformation. 123
Union Foundry & Machine Co., Pa.. 179
Union Coal Co., Pa.... 326
Union Con. Mg. Co., Nev., 23, 47, 86, 110, 278, 621
Union Iron and Steel Co., O.... 35
Union Iron Works, Ore.... 491
Union Leasing Co., Colo., 109, 349, 516, 542, 568, 612
Union Mg. Co., Colo., 109, 495, 492, 516, 252, 561, 573, 597, 621
Union Mg. Co., Idaho.... 109
Union Oil Co., Colo.... 36
Union Pacific Coal Co., Wyo.... 63, 591
Union Shaft, Nev.... 183
Union Steel Co., Ill.... 83
Union Switch and Signal Co., Pa.. 275
United Alkali Co., Great Britain.. 193, 212
United Coal Co., Ariz.... 395
United Coal Co., Pa.... 423
United Mexican Mg. Co., Mex.... 447
United Mine-Workers of America. 36, 62, 180, 302, 591
United Mines, Colo.... 205, 445, 612
U. S. Bond Issue.... 162
U. S. Bureau of Education.... 26
U. S. Bureau of Information.... 218
U. S., Coal Mining in.... 99
U. S. Copper Exports.... Weekly
U. S. Economic Reduction Co., Colo, 36, 132, 469
U. S. Export Trade.... 553
U. S. Fish Commission, Report.... 123
U. S. Foreign Commerce.. 66, 163, 258, 595
U. S. Geological Survey.... 1, 3, 25, 27, 74
U. S. Geol. Survey, *Atlas*.... 339, 387
U. S. Gold Loan.... 97, 115
U. S. Gold Movement.... 146
U. S. Gold Production.... 74
U. S. Gold and Silver.... 482
U. S. Gold and Silver Exports and Imports.... Weekly
U. S. Government Publications, Index.... 98, 339
U. S. Grant Mg. Co., S. D., 525, 549, 573, 597, 621
U. S. Iron Production.... 73, 75
U. S. Loan, Nev.... 138, 186
U. S., Money in, 67, 138, 258, 330, 354, 450, 570
U. S. Mint, Coinage, 19, 43, 139, 235, 330, 570
U. S. Mint, Director's Report.... 123
U. S. Mineral and Metal Production, 506
U. S. Oil Exports.... 60
U. S. Patent Office.... 222
U. S. Phosphate Co., Fla.... 61, 253
U. S. Projectile Co., N. Y.... 443
U. S. Rubber Co.... 491
U. S. Silver Production.... 73
U. S. Steel.... 169
U. S. Tinplate Production.... 259
U. S. Treasury Receipts, 1894.... 19
U. S. Treasury Statement.... Weekly
United Verde Copper Co., Ari.... 165, 468
United Verde Extension Gold, Silver & Copper Co., Ariz.... 468
Unloading Cars, Device for, Pat.... 323
Upson, Theodore F., Amalgamating Mech. Pat.... 226
Urruty, Francois L. M., Electrolytic Copper, Pat.... 442
Utah Con. Mg. Co., Utah.... 134, 135
Utah Silver Production.... 183
Utah Southern, Denver & Rio Grande Railroads, Cal.... 420
Utica Mine, Colo.... 325
Utopia Mg. Co., Cal.... 564

V

Valentine Iron Co., Pa.... 251, 443
Valentin, Dr. J., *Sierras de los Partidos de Olavarria y del Azul*.. 99
Valenzuela Mg. Co., Mex. 167, 191, 213, 237, 285, 309, 333, 357
Vallejo, Augusto.... 615
Valley Mine, Colo.... 469, 612
Valliere de, H., N. Y.... 588
Valve Gear for Regenerative Furnaces, Pat.... 298
Vancouver, Coal Production of.... 273
Vanderbilt Steel and Iron Co., Ala... 131
Van der Weyde, Peter H., N. Y.... 275
Van Moppes & Rose, N. Y.... 275
Vannier, Chas. H., Coke Oven, Pat... 418
Van Ruybekis Pat., Phosphoric Acid Making.... 539
Van Ryn Mg. Co., Transvaal.... 213
Van Smelting Co., New Mex.. 326, 470, 590
Varney Mine, Colo.... 157, 517
Varney's Pat. Spooning Tool.... 11, 539
Vathaire, A., Desulphurization of Pig Iron.... 317
Vautin, C. J. T., Metal Reduction, Pat.... 418
Vautin C., Bromo-Cyanide Process of Gold Extraction.... 602
Vautin's Pat. Metallic Chromium Manganese.... 586
Vautin's Pat. Separating Metallic Potassium and Sodium.... 490
Veins, Extralateral Right.... 123
Venable, F. P., *Short History of Chemistry*.... 98
Venezuela, Railroads.... 130
Venezuela, El Callao Gold Mine.... 457
Venezia Mg. Co., Ariz.... 541
Ventilating Mines, Fans for, Pat.... 250
Ventilating Fan, Blades for, Pat.... 250
Ventilation of Mines.... 218, 578
Venus Gold Mg. Co., Cal.... 237
Vermilion Range, Minn.... 566
Vesuvius Iron and Nail Works, Pa... 251
Victor Coal and Coke Co., Colo.... 252
Victor Gold Mg. Co., Colo., 21, 40, 85, 102, 132, 141, 157, 195, 285, 357, 381, 405, 421, 429, 453, 477, 495, 501, 525, 549, 573, 597, 621
Victoria, Cyanide Process.... 582
Victory United Mine, West Austr.... 472
Vieille Montague, Zinc Mg. Co., Belgium.... 573
Viking Mg. Co., Utah.... 327
Villa Rica Mg. and Milling Co., Ga.. 612
Villars, E. de, *Statistique Generale des Richesses Minerales de la France*.... 51
Viola Mine, Colo.... 396
Virginia Ass'n of Engineers.... 131
Virginia Canon Tramway, Colo.... 468
Virginia Miners' Union, Nev.... 87
Virginius Mine, Colo.... 301
Virtue Iron Co., Minn.... 556
Virtue Mg. Co., Ore.. 15, 135, 183, 230, 422
Vishnegradski, M.... 429
*Vivian, Hussey.... 32
Von Ehrenwerth, Josef Gangl.... 339
Vulcan Coal Mine, Colo.... 520
Vulcan Iron Co., Pa.... 419
*Vulcan Iron Works, Tramway at English Mt. Mines.... 55
Vulcan Tin Mine, Queensland.... 519
Vulture Mine, Ariz.... 180

W

Wadesville Coal Shaft, Pa.... 254
Waddle, H. W., Fan for Ventilating Mine, Pat.... 270
Waddell-Entz, Co., Conn.... 491
Wages, Payment in Money.... 129
Wadleigh, Frank A.... 251
Wadleigh Mining Camp, Colo.... 252
Walburn-Swenson Co., Ill.... 59
Walker Coal & Iron Co., Pa.... 443
Walker, J. A., How to Use Plumbago Crucibles.... 134
Walker-Wilkins Voltaic Battery.... 105
Walkill Granite Co., N. J.... 159
Walkill Lime and Cement Co., N. J.. 86
Wallace & Burton.... 419
Wallace Coal Mine, N. M.... 39
Wallace, William Mine, Colo.... 421
Wallace, W. W., Jr., *Brick Pavements*.... 578
Wallingford Mica Mine, Que.... 40
Wallis, Henry W., Chlorine Making Process, Pat.... 394
Wallis, William L., Gas Purifier, Pat.... 226
Wall Rocks of Cal. Gold Mines.... 172
Walrand Steel Process.... 34
Walrand, C., Siemens-Martens Furnace Construction.... 606
Walsenburg Coal Co., Colo.... 228
Walsh Smelter, Colo.... 516
Ward & Codwell Mine, Cal.... 541
Ward District, Colo.... 156
Ward Mining Dist., Colo.... 325, 387
Warden, William G.... 347
War Eagle Mine, B. C.... 16, 255, 621
War Eagle Mine, Colo.... 228
War Eagle Mine, Nev.... 158
War Eagle Mining Group, S. Dak.... 327
Warrior River Coalfields, Ala.... 36
Warrior River Coal Co., Ala.... 108
Warner, Jonathan.... 419
Warner's Pat. Smoke-Consuming Attachment Blast Furnaces.... 514
Warranty, Implied.... 582
Warren-Scharf Asphalt Paving Co.. 443
Warren's Pat. Excavating Machine.. 610
Warren Pipe Factory, N. J.... 540
Warsaw Camp, Ari.... 156
*Warwick, A. W., Rate of Solution of Gold in Cyanide.... 604
Warwick Iron Co., Pa.... 491
Warwick J., Treatment of Lead Fumes, Pat.... 418
Wasatch Mg. Co., Utah.... 398
Washburne & Moen Mfg. Co.... 12, 491
Washington, Coal Mine Inspector's Report.... 147
Washington Mine, Cal.... 541
Washington Mine, Colo.... 492
Washington Mine, Idaho.... 133
Washington Mine, Mont.... 158
Washington, Ga., Plant.... 611
Waugh Steel Co., Ind.... 83
Water Cooling Apparatus.... 293
Water Driven Air Compressor.... 345
Watt's Furnace, Kentucky.... 515
Water Gas, Mfg. of, Pat.... 466
Water Gas and Oil, Mfg. of, Pat.... 346
Water for Mining Purposes.... 465
Water Motor, Pat.... 346
Waterproofing Bricks.... 586
Water Power Bridge.... 558
Water Power, Mercurer, Utah.... 279
Water Power, Owner's Rights and Duties.... 57
Water Power, Rights of Lessee.... 393
Water Rights.... 393
Water Rights on Public Lands.... 344
Water Supply, N. J. Geol. Sur. Rept. 387
*Water Supply, Subterranean, Emig's System.... 81
Waterways, Germany.... 130
Water Wheel, Turbine.... 226
Watson, J. G.... 155
Watt Blue Gravel Mg. Co., Cal.... 141
Wayland Portland Cement Co., N. Y.. 614
Weaver, Goetz & Co., Ind.... 61
Wedge Mine, Colo.... 565
Webster, John H.... 347
Webster, William R., Scheme for the Study of the Physics of Cast Iron.. 294
Weber Mine, Idaho.... 37
Wehner, F. C.... 83
Weiden Mine No. 2, Colo.... 469
Weigand Gold Mg. Co., Minn.... 158
Weighing of Coal at Mines.... 441
Well Bailer, Oil or Water, Pat.... 202
Weldon, Albert.... 155
Weiden No. 2 Mine, Colo.... 13
Welding Apparatus, Electric, Pat.. 202
Welding Iron, Phenomena in.... 295
Well Drilling, Pat.... 370
*Wellington, Arthur M.... 457, 472, 511
Wellington Group Mines, Colo.... 228
Wellman Iron and Steel Co., Pa., 60, 108, 227, 372, 444
Wellman's Pat. Melting Furnace.... 610
Welsbach Light and the Glow Lamp. 273
Welsbach Mantles, Light from.... 58
Wells, J. S. C.... 59
Wells, J. S. C., Bromo-Cyanide Process.... 531
Wells, J. S. C., Cyanide and Cyanogen Bromide.... 483
Wentworth Co., N. S. W.... 429
Wentworth Mining Camp, Mo.... 301
Wentworth Mg. Co., Utah.... 543
Wentworth Mines, Mo.... 61
West Aspen Mt., Colo.... 157
West Cable Mg. & Milling Co., Utah, 333, 398
West Con. Virginia & California Mg. Co., Nev.... 15, 110, 183, 302, 590
West Bear Ridge Colliery, Pa.... 183
West Eagle Company, B. C.... 399
West End, Colo.... 612
West Harmony Drift, Cal.... 396
West Iron Mountain Mine, Mont.... 278
West Kootenai Mines, B. C.... 255
West Pacific Mine, Mont.... 14
West Mountain Placer Mining Co., Utah.... 254
West of Scotland Iron & Steel Institute Meeting.... 419
West Superior Iron & Steel Co., Wis. 251, 395, 541
West Va. Coal Miners' Strike.... 544
West Va. Flat Top Coal Region.... 423
Western, Chas. R., Pulverizing Mill. Pat.... 298
Western Australia, Coal.... 605
Western Australia, Gold.... 51, 75
Western Chemical Co., Colo.... 35
*Western Electric Co., Ill.... 33
Western Federation of Miners.... 491
Western Iron and Steel Co., Wash.... 59
Western Pennsylvania Engineers' Society.... 107, 203, 275, 371
Western New York & Pennsylvania R. R.... 136
Western Nevada Copper Co., Mont... 518
Western Society of Engineers.... 347, 491
Western University.... 587
West Virginia Coal Mines.... 121
Westinghouse Electric and Mfg. Co., Pa.... 35, 444, 587, 611
Westinghouse Machine Co., Pa., 204, 324, 443
Weston, W.... 361
Wewissa Mine, Colo.... 373, 492
Whaler's Pat. Recovering Gold from Streams.... 514
Wharton Furnace, N. J.... 84
Wheelock Mine, Cal.... 204
Wheeler, H. A., Occurrence of Blende in Lignite.... 248
Wheeler Hill Gold Mg. Co., Cal.. 444, 453
Wheeler Mine, Colo.... 180, 325, 372
Wheeler, E. A.... 491
Wheeler Sterling Steel Co., Pa.... 59, 587
Wheeling Steel and Iron Co., W. Va., 83, 347, 467, 563
Whitaker Iron and Steel Mill, W. Va., 107, 275
White Ash Mine, New Mex.... 206
White Cap Mine, Colo.... 228
White Cliffs Opal Fields, N. S. W.... 437
White, H., *Coin's Financial Fool*.... 531
White Eagle Mine, Mont.... 566
White Gold Group, Colo.... 420
White Lake Quarry, N. Y.... 614
Whitehead, Cabell, Estimation of Tellurium in Copper Bullion.... 389
White Lead Drying, Hamilton's Pat.. 34
White Lead and Nitrate of Ammonia Making, Wilcox's Pat.... 610
White Lead Making, Macarthur's Pat.... 490
White Signal Mine, N. Mex.... 206
White Swan Mg. Co., Ore, 15, 39, 62, 135, 230
Whitman, Caleb S., Me.... 299
Whitlock Mine, Cal.... 204
Whiting, Barnet M., Gold Saving Apparatus, Pat.... 370
Wiegand Gold Claim, Ont.... 16
Wiggs' Pat. Mining Machine Cutter, 82, 610
Wigton, Richard Benson.... 203
Wildenhouse Mine, N. C.... 374

Wild Rye Mine, Ari..... 612
Wiley, Harvey W., *Principles and Practice of Agricultural Analyses.* 459
Wilkes-Barre & Eastern R.R. Co., Pa. 88
Wilkes Mine, Ga.....612, 13
Wilkinson, Thos. L..... 413
Willard, Charles P. & Co., Ill.. 107
Willcox's Pat. White Lead and Nitrate of Ammonia Making..... ... 610
Williams Granite Co., N. H..... 613
William's Pat. Centrifugal Separator..... 562
Williams-McKinley Suit, Minn.....37, 589
Williamson, Wm. C..... 611
William-on, Chas. P., Reducing Iron Ore. Pat..... 418
Willson's Pat. Calcium Carbide Process 610
Willson's Pat. Product in Form of Crystalline Calcium Carbide... 610
Wilson Mine, Colo..... 564
Wilson River Goldfield, N. Z 112
Wilson, V.. Guide to the Yukon Gold Fields..... 387
Wiltsee, E. A..... 611
Winchester Repeating Arms Co..... 179
Winding Engine, Electric Power.... 535
Winchell, Prof. Horace V..... 327
Winchell, H. V , and Grant, U. S., *Report on the Rainy Lake Gold Region*..... 147
Windsor Red Stone Co., Conn..... 85
Winifrede Coal Co., West Va..... 231
Winnie Mine, Colo..... 61, 109
Winslow, A., Historical Sketch of Lead and Zinc..... 124
Wire Rope, Flattened Strand 440
Wire Rope Tramway, English Mt. Mine, Cal..... 55
Wirth, Albert, *Rise of South Africa*.. 555
Wisconsin Mines, Cal..... 204
Witherow Co., Pa.....205, 324, 491
Witwatersrand, Cost of Mining...529, 535
Witwatersrand Gold Production, Transvaal....63, 194, 208, 213, 399, 495, 597
Wittbecker, Wm. A., Electrical Work, Domestic..... 602
Wolftone Mine, Colo..... .....300, 421
Wolle, Chas. E., Coal Handling, Mack Pat 226
Wolverine Copper Mining Co., Mich., 16, 134, 141, 158, 205, 213, 229, 237, 283, 389, 446, 542
Wood, C. E., Bernard A..... 443
Wood & Bro., John 587
Wood & Burnett's Pat. Coal Washer. 154
Wood Mine, Colo..... 133
Woodstock Iron Works, Ala.....59, 587
Woodward Colliery, Pa.. 87
Woosung, China, Gun Explosion. .. 514
Worcester Salt Co., N. Y..... 15
Worthington, Henry R., N. Y..... 540
Wray Iron Mine, Ga..... 492
Wray Mg. Co., Ga..... 540
Wright, C. W..... 12
Wright, George C..... 347
Wright, William, Coal Loader, Pat.. 226
Wyandotte Claim, Wash..... 591
Wynaad Dist., India, Gold Fields.... 289
W. Y. O. D. Mg. Co., Cal., 102, 195, 285, 357, 381, 405, 429, 453, 477, 501, 525, 549, 573, 597, 621
Wyoming, Coal Prices 111
Wyoming Geological and Historical Society 203
Wyoming Lubricating Oil Co., Wyo. 423
Wyoming Oil Fields, Wyo..... 567
Wyoming Oil & Mining Co., Wyo.... 280

X

Xenogenous Ore Deposits..... 268
Xeres-Lanteira Copper Mg. Co., Spain..... 21

Y

Yadkin County Mines, N. C..... 471
Yak Mg. Co., Colo... 37
Yale College, Annual Report..... 371
Yankee Boy Group Mines, S. Dak.... 303
Yankee Girl Mine, Colo 565
Yarra Gold Mg. Co., Mex 111
Year 1895..... 1
Yellow Creek District, S. Dak..... 63
Yellow Jacket Mg. Co., Nev., 23, 47, 71, 95, 119, 143, 156, 167, 405, 429, 453, 477, 501, 525, 549, 573, 597
Yonah Land & Mg. Co., Ga..... 493
Yorkville Gold Mines, Ga.....123, 349
Yosemite No. 1 Mine, Utah..... 63
Yough River Coal Co., Pa..... 326
Young, James..... 443
Young & Bell, Producing Illuminating Gas, Pat..... 562
Young, Transferring Metal from Furnaces, Pat..... 514
Youngstown Bridge Co., O., 35, 83, 208, 275
Youngstown Iron and Steel Mills, O., 113, 540
Yuil e, Robert B., Valve Gear Pat.... 298
Yukon Gold Fields..... 387

Z

Zeille Mine, Cal..... ..... 13, 324
Zeka Mine, Ariz 541
Zenobia Mine, Colo..... ....85, 181
Zentgraf Mine, Cal..... 135
Zinc and Lead, History of.....51, 124, 219
Zinc Market ....Weekly
Zinc Mining, Arkansas..... 123
Zinc Mines, Joplin, Mo..... 206
Zinc Ore Market, Joplin, Mo....Weekly
Zinc Ores, Nomenclature of..... 292
Zinc Shingle Manufacture 38
Zinc, U. S. Prod., 1894..... 217
Zereuer, Martin B , Centrifugal Ore Separator, Pat..... 442
Zipp & Seizenap Mine, Cal..... 541
Zululand Gold Fields..... 519